High Speed

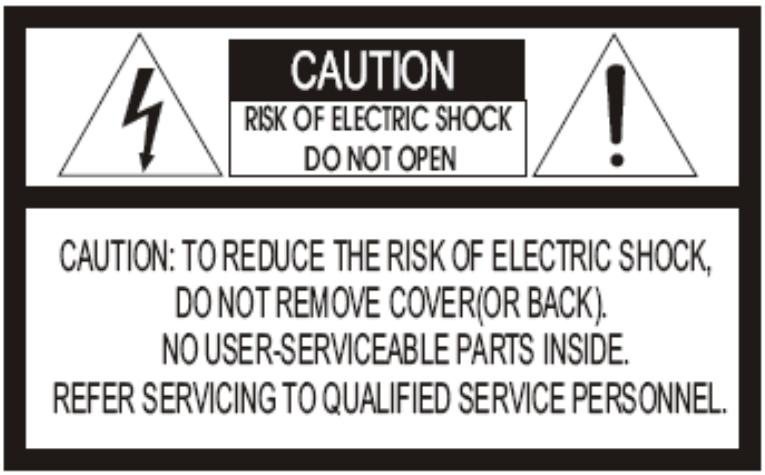
Mini IP Dome Camera

MODEL: SVD-3020

User Manual (English)

Version 2.0

Warning


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER(OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER(OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
CAUTION:
To prevent electric shocks and risk of fire hazards, do NOT use other than specified power source.

Warning

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment can radiate radio frequency energy therefore, if it is not installed and used in accordance with the instruction, it may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Precautions

1. **HEED WARNINGS**

   Adhere to all warnings on the appliance and in the operating instructions.

2. **POWER SOURCES**

   Operate this equipment only from the type of power source indicated on the label. If you are not sure of the type of power being used, consult your dealer or local power company.

3. **OVERLOADING**

   Do not overload wall units and extension cords, as this can result in a risk of fire or electric shock. Frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. Periodically examine the cord and replace it if appearance indicates damage or deteriorated insulation.

4. **POWER PLUG PROTECTION**

   Route the power supply cords so they cannot be walked on or pinched by items placed upon or against them.

5. **VENTILATION**

   Do not block the slots or openings of the video server and do not place the equipment on a bed, soft rug, or other similar surface.

6. **ATTACHMENTS**

   Do not use attachments other than those specifically recommended by the equipment manufacturer as they may cause hazards.

7. **TO PREVENT SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE**

   If you spill liquid on the unit, consult authorized service personnel. Moisture can damage internal parts. Do not use this equipment near sources of water.

8. **ACCESSORIES**

   Use only with a manufacturer recommended card, stand, tripod, bracket or table. The equipment may fall, causing serious injury to a child or adult and serious damage to the appliance.

9. **CLEANING THE OUTSIDE SURFACES**

   Unplug this equipment from the wall outlet before cleaning. Use a damp cloth for cleaning.

10. **REQUIRING SERVICE**

    Unplug the equipment from the wall outlet and request qualified service personnel.

11. **SAFETY CHECK**

    Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in safe operating condition.

12. **IMPORTANT NOTE TO THE INSTALLER**

    This installation should be made by a qualified service person and should conform to all local codes. In order to provide this product with protection against risk of unintentional operation by employees,

customers, janitors and cleaners working on the premises, and from falling objects, building vibrations and similar causes, it is recommended this product be enclosed in the tamper-resistant lock box. Make sure that the lock box is well ventilated or maintained with an air cooling system.

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1. Introduction of SVD-3020

1.1. Product Overview

• About the Video Server

The Intelligent Network Camera SVD-3020 provides advanced solutions for viewing, recording and retrieving video over computer networks, including the Internet. The SVD-3020 compresses Video, and then transmits the compressed video over computer networks at speeds up to 30 fps. Additionally, SVD-3020 provides audio and alarm information from the remote site.

SVD-3020 has one audio input and one alarm input. The user can listen to the remote site with the audio input. The SVD-3020 features are accessible through the Camera browser, allowing users to access and control their systems anytime from virtually anywhere.

1.2. Basic Function

• Real time MPEG-4 video compression

When the analog video is inputted, the file is compressed in the MPEG-4 format. The MPEG-4 is an optimal compressing engine that compresses video files to reduce the size of memory. More video files could be saved when saving from remote areas.

• Stable system operation

Along with the Linux operating system, which is optimal for the embedded system, the hardware watch-dog is used to enhance the system's safety. The increase in the safety of the system makes network service stable.

• User Access Control

The SVD-3020 server performs an **access control check to verify** whether the user is authorized. If the user is not registered, the access to the 4 channel video server is blocked. Only the user with the administrator right can set the default values and carry out the PTZ motions of the video server. Users without the administrator right (observer) can only monitor.

• IP Filtering

SVD-3020 can block the access from a particular IP address through IP filtering. Only the IP addresses recognized by the user can access the video server.

• Embedded Motion Detection function

SVD-3020 has an embedded sensor system that detects movements. The user can setup the motion detection mode on the viewer. The observing areas of motion and sensitivity can be regulated according to the user's need. The user can also install various types of sensors additionally (ex. Heat/shock/alarm sensor etc.), being connected with the video server.

• E-mail and FTP transmission

SVD-3020 sends images to the designated E-mail address or FTP Server when an alarm is raised or movements are detected. Even when the user is not in the course of monitoring, the system notifies the situation to the user automatically.

• Easy Firmware Update through Network

SVD-3020 users can easily enhance the functions of the system through network Firmware-Update without having to pay additional expenses.

• Multi Viewer (16 Channel viewer) Software

In order to maximize the performance of the SVD-3020 video server, a Multi Viewer software is provided free of charge with other accessories. The software should be installed in a user PC. It is capable of connecting at most 16 analog cameras and has a set of convenient features such as presetting, emergency recording and so forth. For example, recording starts automatically according to the preset time and in case of emergency, it starts with a single click. Also, when playing, you can fast-forward and fast-reverse at a high speed, which is 32 times faster than the normal playing speed.

1.3. Features

Network Board

- **NTSC : D1 (704 X 480) at 30 fps / PAL : D1 (704 X 576) at 25 fps**
- **Monitor live video transmitted in real-time**
  - Remote monitoring up to 120 fps live video
  - Real MPEG4
  - Low network bandwidth requirement
- **Simultaneous video and audio signal transmission**
  - Bi-directional Audio
  - Monitoring voices and background sounds over a single connection
- **Built-in Web Server and Network Interface**
- **Power over Ethernet**
- **No PC Needed for Operation - Standalone Unit**
- **Linux Based Operating System**
- **Embedded Motion Detection function**

  SVD-3020 has an embedded sensor system that detects movements.

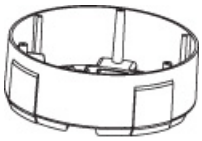
  The observing areas of motion and sensitivity can be regulated according to the user's need.
- **Supports network environments**
  - Ethernet or Fast Ethernet interface
- **Easy Firmware Update through Network**
  - Firmware Update at remote sites is possible through Network
- **E-mail and FTP transmission**

  - SVD-3020 sends images to the designated E-mail address or FTP Server when an alarm is raised or movements are detected.
- **Digital sensor TTL input**
- **Alarm output**
- **RS485 interface for Pan, Tilt and Zoom control**
  - Functions can be set remotely using an exclusive application

'

1.4. Packing Contents

Dome Camera Unit

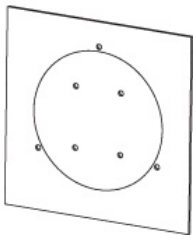


UTP Cross LAN Cable

Dome bubble with trim ring

Screws
(M3x15 Tapping Srew-4)
(M3x8 Tapping Srew-3)

Alarm In/Out Cable



Pie-shared template

CD-ROM with manual and software

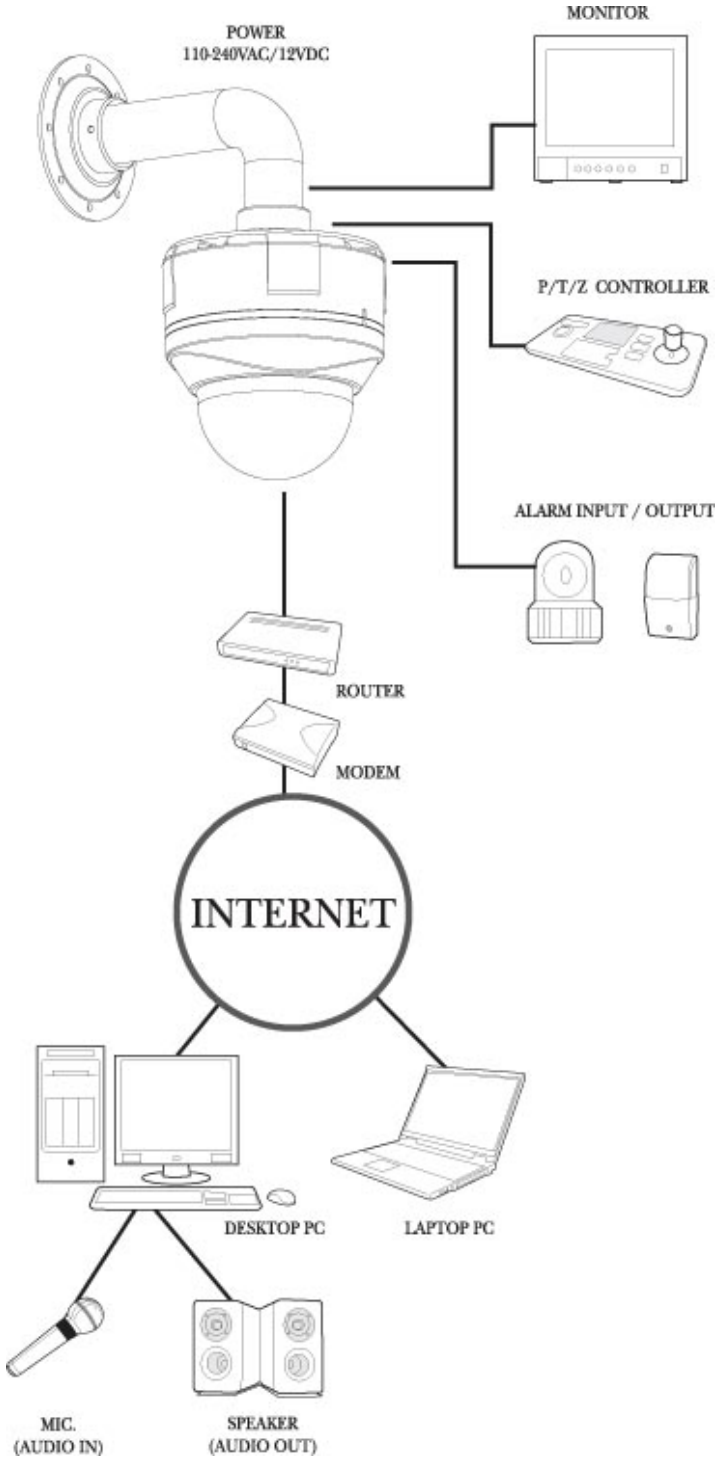
DC Adapter(12V/1A)
-Option-

1.5. System Requirements

- Operating System : Microsoft Windows® 2000 or Windows® XP
- CPU : Intel® Pentium®Ⅳ1.6Ghz or faster
- RAM : 512MB or higher
- VGA : AGP, Video RAM 64MB or higher
- Web Browser : Internet Explorer version 6.0 or higher
- Direct-X : 8.x or higher
- INPUT Voltage : DC 12V / 1A
- Operating Temperature: 0℃ ~ 40℃(32~4.4°F)

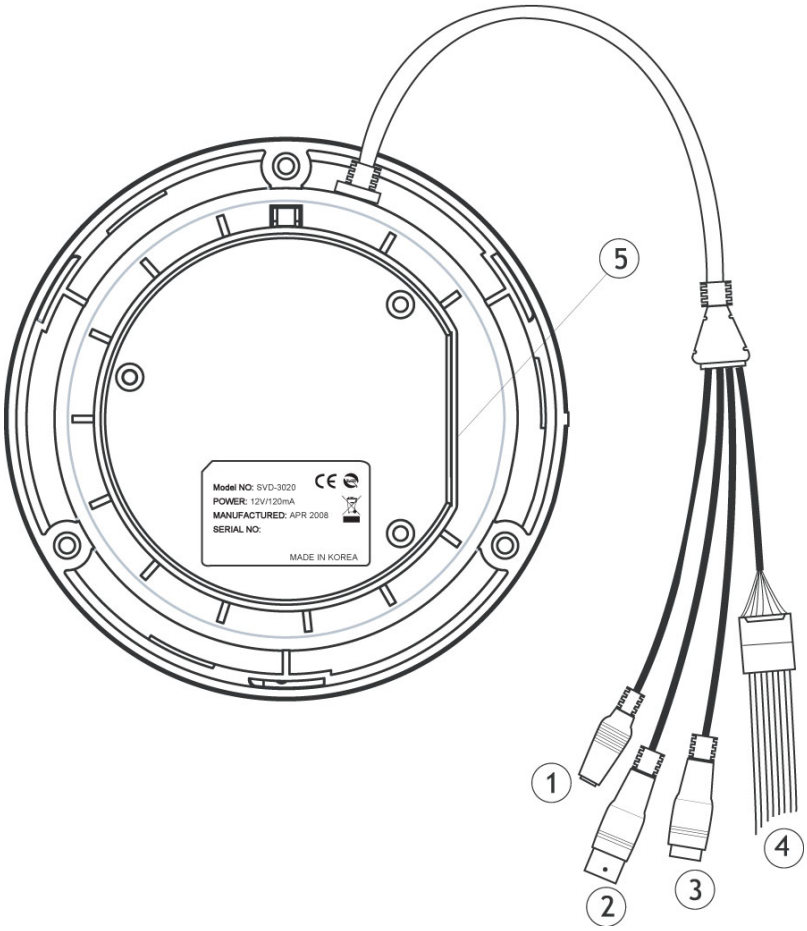
- Humidity: 20~80% RHG, Non-Condensing

1.6. System Configuration



1.7. Physical Description and Function

1.7.1. Rear View



① **Power: DC 12V**

② **Video Out**

③ **Speaker Out**

④ **RS-485/ 4 Sensor In/ Alarm Out**

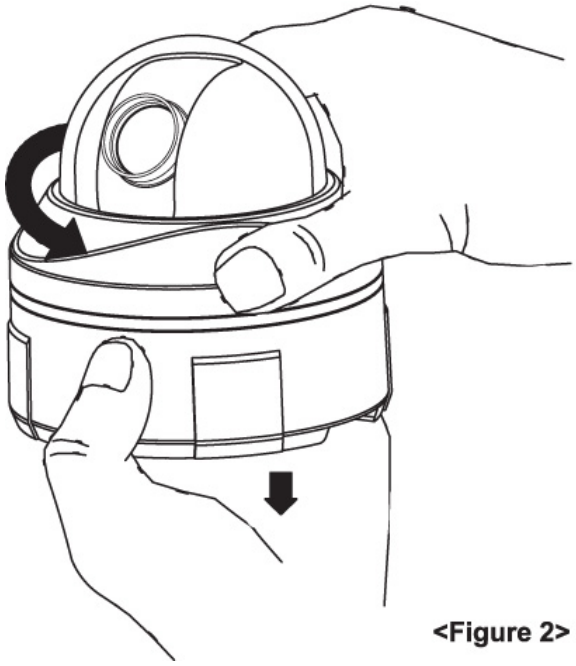
⑤ **Ethernet**

2. Installation & Configuration

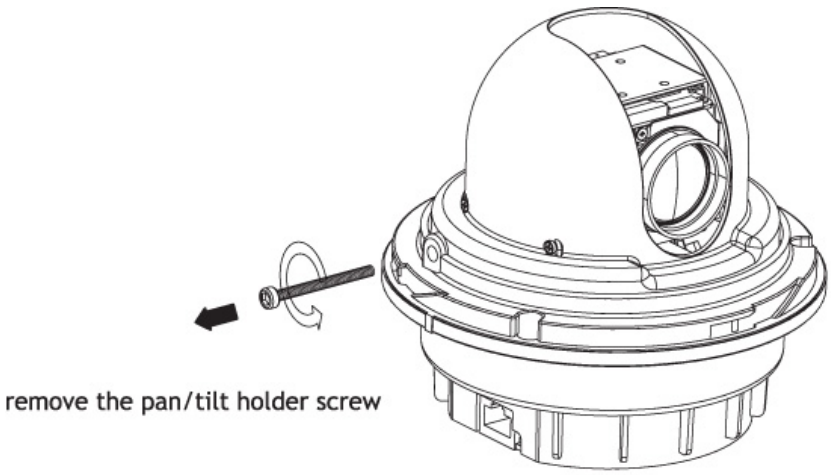
2.1. BEFORE INSTALLATION

Before installation, please remove the pan/tilt holder screw. Use the following steps.

1. Remove the dome bubble with trim ring shown as Figure 2.
2. Remove the pan/tilt holder screw shown as Figure 3.



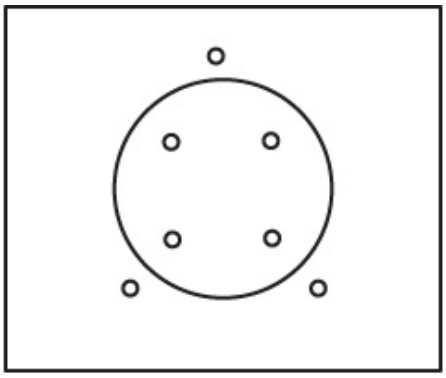
<Figure 2>



<Figure 3>

2.2. Surface Mount Installation

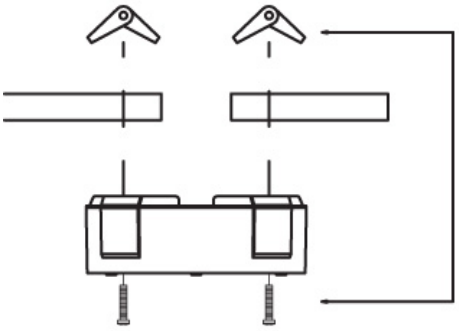
1. Punch out the pie-shaped section from the supplied templates (See Figure 4).
   Using the pie-shaped template, either cut a hole through the ceiling or make a hole with a depth of 0.25 inches (6mm)



<Figure 4. Drill holes using the pie-shaped template>

2. In case of ceiling mount, drill holes for toggle bolts or studs Refer to Figure 5 in case of concrete ceiling mount, drill holes for studs. Refer to Figure 6.

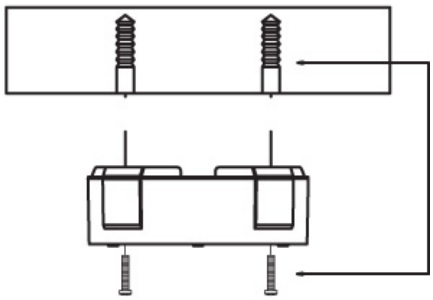
Ceiling



1/8" Toggle Bolt(Not supplied) or
M3x15 self Tapping screw(supplied)

<Figure 5. Drill holes for toggle bolts or studs>

Concrete ceiling



1/8" Toggle Bolt(Not supplied) or
M3x15 self Tapping screw(supplied)

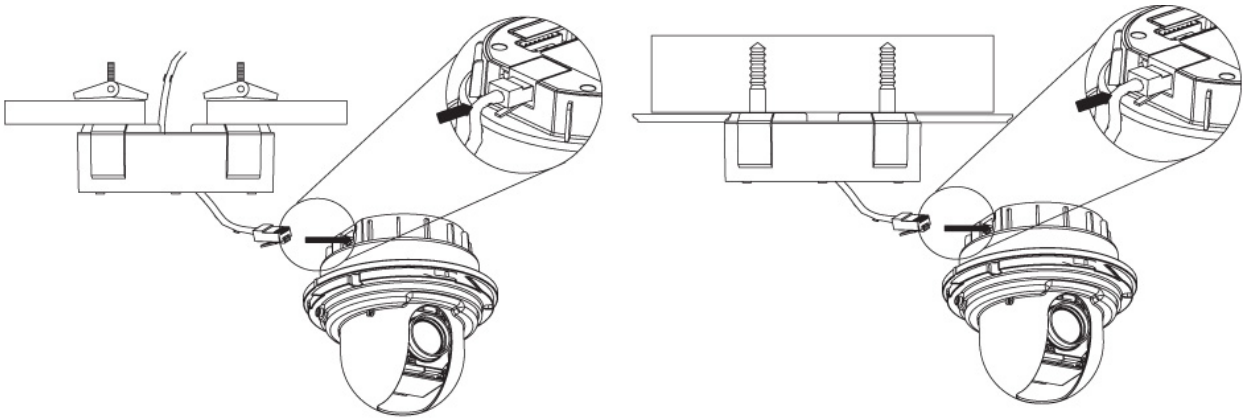
<Figure 6. Drill holes for studs>

3. Connect the wiring. Refer to Figure 7.

You can plug the male RJ45 connector on the supplied interface cable (refer to Figure 6) into the mating connector on top of the dome drive and then connect your wiring to the other end of the cable. Or you can connect the supplied RJ45connector to your wiring and the plug the connector into the dome drive.

Refer to Table D, Table E, and Table F for wiring connections. Note that you can connect video using either an unshielded twisted pair (UTP) of wires (refer to Table D) or coaxial cable (refer to Table E) A BNC connector for coaxial cable is attached to

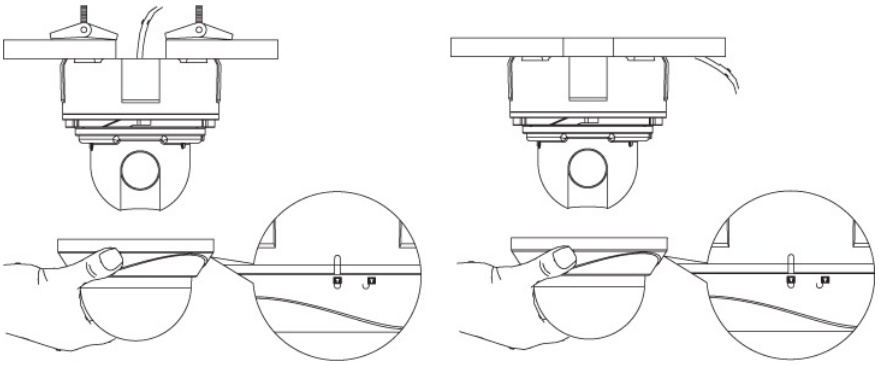
the dome drive



<Figure 7 Wiring Attached to Ceiling>

4. Line up the tabs on the trim ring with the slots in the dome drive. Snap the trim ring and bubble into place.

Refer to Figure 8 & Figure 11.



<Figure 8. Snap the bubble and trim ring into place>

<Table D> Interface Cable wiring

Pin	Function
1	DC12V
2	DC12V
3	GND_PWR
4	GND_PWR
5	RS485_+
6	RS485_-
7	SEN_IN0
8	SEN_IN1
9	SEN_IN2
10	SEN_IN3
11	-
12	ALAM_OUT
13	GND_SIG
14	VIDEO_OUT

1	MIC IN
2	GND

<Table E Video Coaxial Cable Requirements >

Cable Type	Maximum Distance
RG 59/U	750 ft (229m)
RG 6/U	1000 ft (305m)
RG 11/U	1500 ft (457m)

*Cable requirements: 75-ohm impedance

*All-copper center conductor

*All-copper braided shield with 95% braid coverage

The following are the recommended maximum distances for 12 VAC applications and are calculated with a 10 percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.

< Table F Wiring Distances >

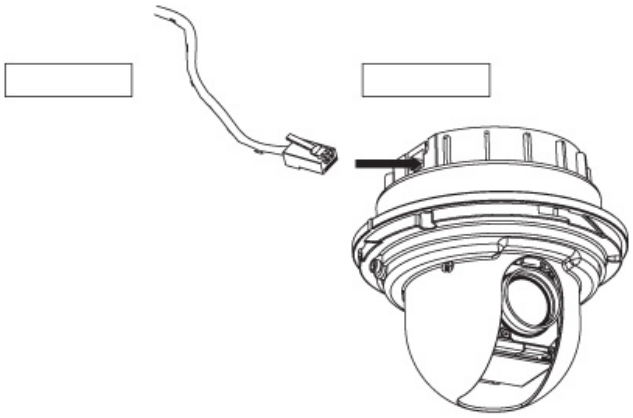
Voltage	Wire Gauge			
	18	16	14	12
12 AVC	215 ft	341 ft	542 ft	863 ft

2.3. IN CEILING INSTALLATION

1. Using the supplied template, cut holes in the ceiling for the dome drive and mounting hardware. Pull the wiring for power, video, and control through the ceiling.
2. Remove the surface mount ring from the dome drive as follows. Refer to Figure 2.
   a. Place fingers on the circular marks located on the sides of the surface mount ring.
   b. Pinch the sides.
   c. Lift and remove the surface mount ring from the dome drive.
3. Connect the wiring.

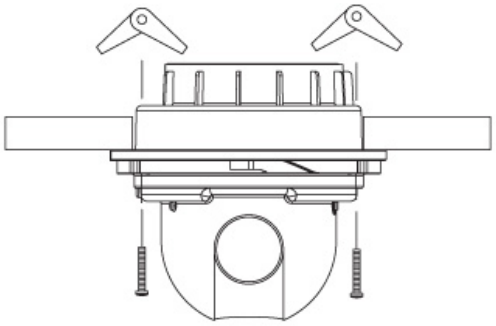
   You can plug the male RJ45 connector on the supplied interface cable (refer to Figure 6) into the mating connector on top of the dome drive and then connect your wiring to the other end of the cable. Or you can connect the supplied RJ45 connector to your wiring and then plug the connector into the dome drive.

   Refer to Table D, Table E, and Table F for wiring connections. Note that you can connect video using either an unshielded twisted pair(UTP) of wires (refer to Table D) or coaxial cable (refer to Table E.) A BNC connector for coaxial cable is attached to the dome drive.



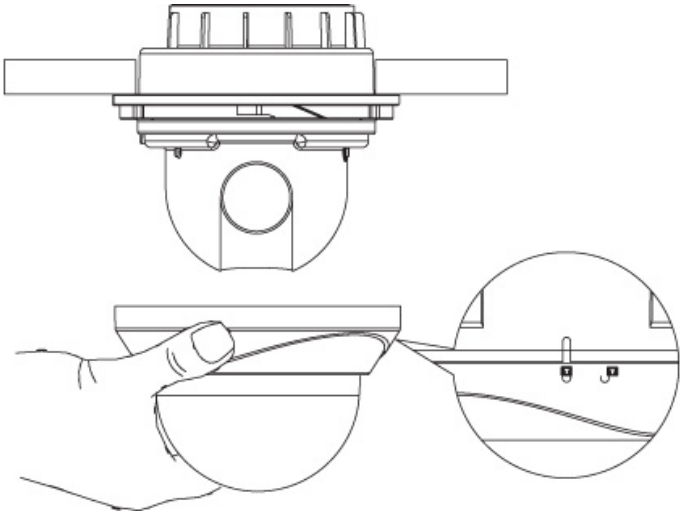
<Figure 9. Plug the RJ45 Connector>

4. Attach the dome drive to the ceiling with the three 1-8 toggle bolts (not supplied). Refer to Figure 9.



<Figure 10. In-Ceiling Installation to a Fixed Ceiling>

5. Line up the tabs on the trim ring with the slots in the dome drive. Snap the trim ring and bubble into place. Refer to Figure 11 .

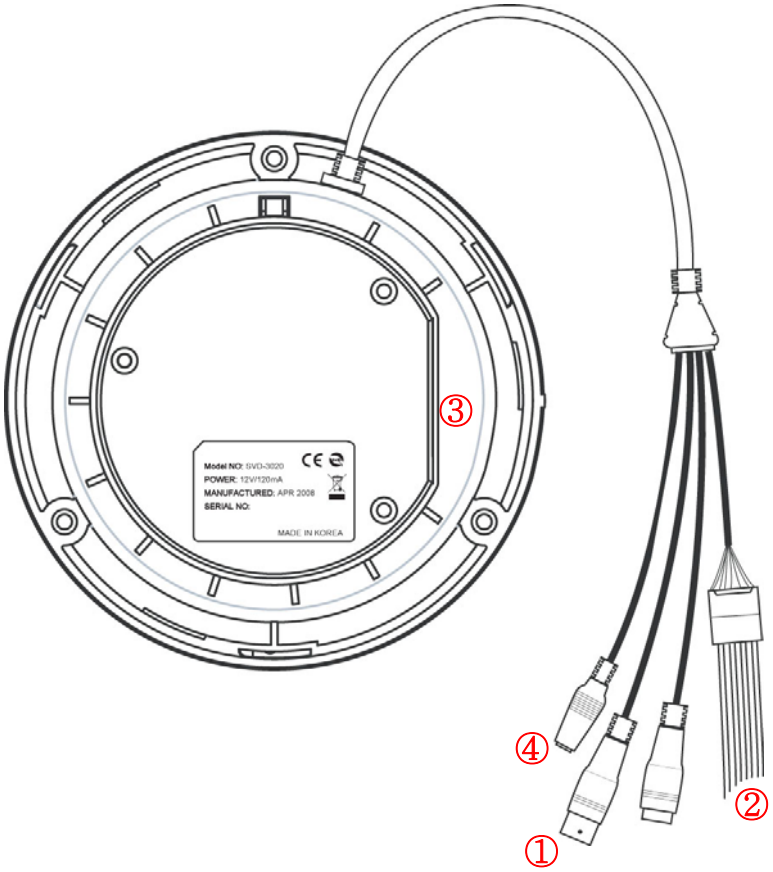


3. Basic Setup of SVD-3020

3.1. Installation

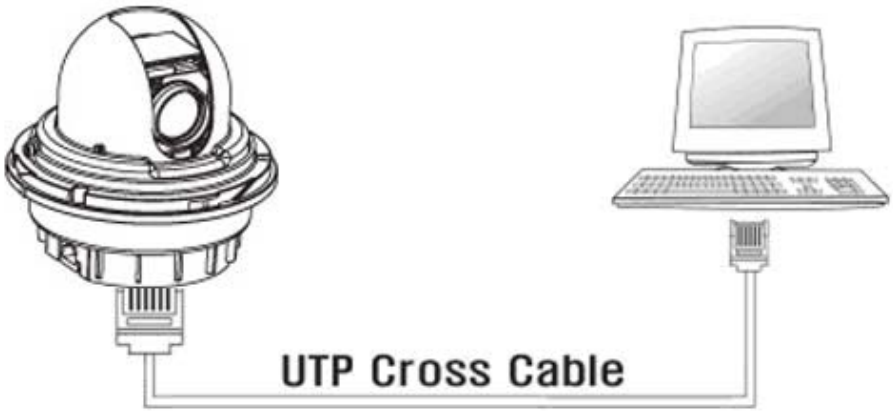
• If you use Network LAN Card in your PC, you can connect the server directly to a PC with a Cross LAN Cable provided in the package.

• On the assumption that both the user PC and SVD-3020 are used under static IP, and SVD-3020 is directly connected with the user PC or Local Network, the installation procedure is to be:



Picture 2.2 Rear View

1) If you want to see the analog video, connect the monitor (LCD or CRT) with a Video Cable. (① of [Pic.2.2])
2) In case of using the P/T/Z Controller, connect it with RS-485 Port (② of [Pic.2.2])
3) Connect the SVD-3020 to a PC with a Cross LAN Cable. (③ of [Pic.2.2])



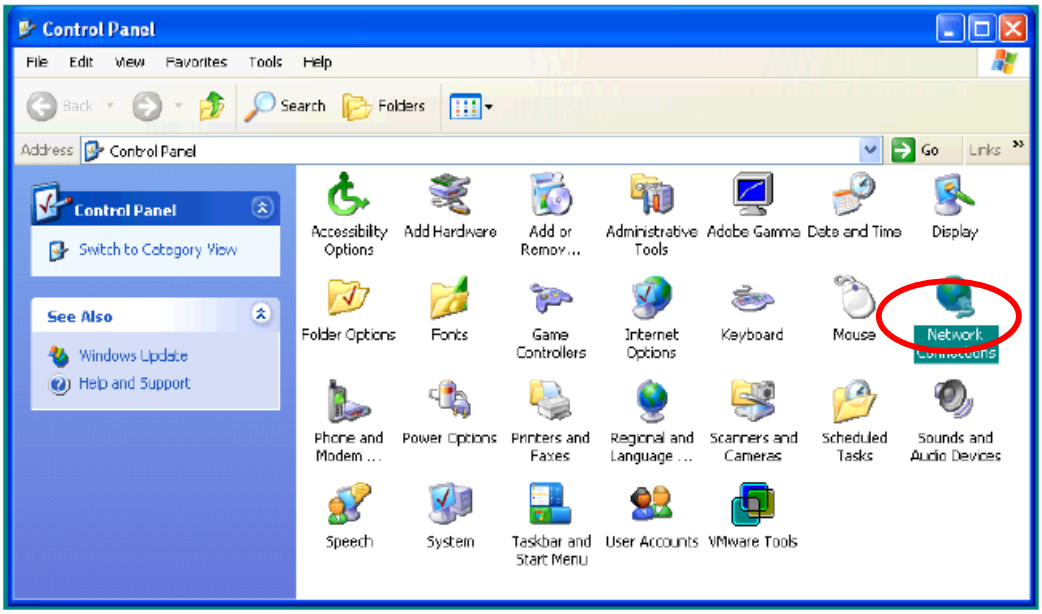
4) Supply power on the Camera and SVD-3020 (Be sure to use Exclusive Power Adapter)-④ of [Pic.2.2])

5) Wait about 2 minutes after power is on the SVD-3020. The light on LINK LED shows that the system is booted successfully.

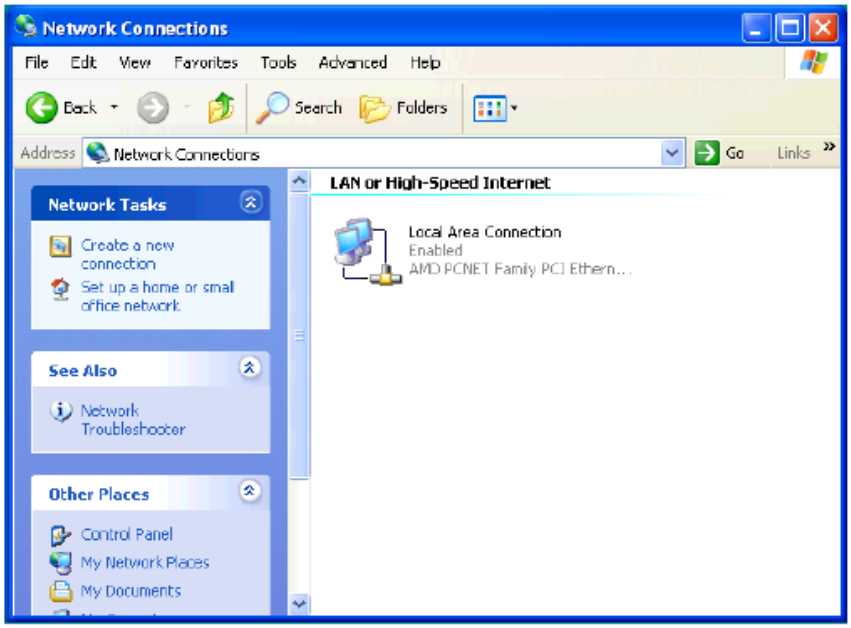
3.2. Network Setting of a PC

3.2.1. Verifying the network setup status of a user PC

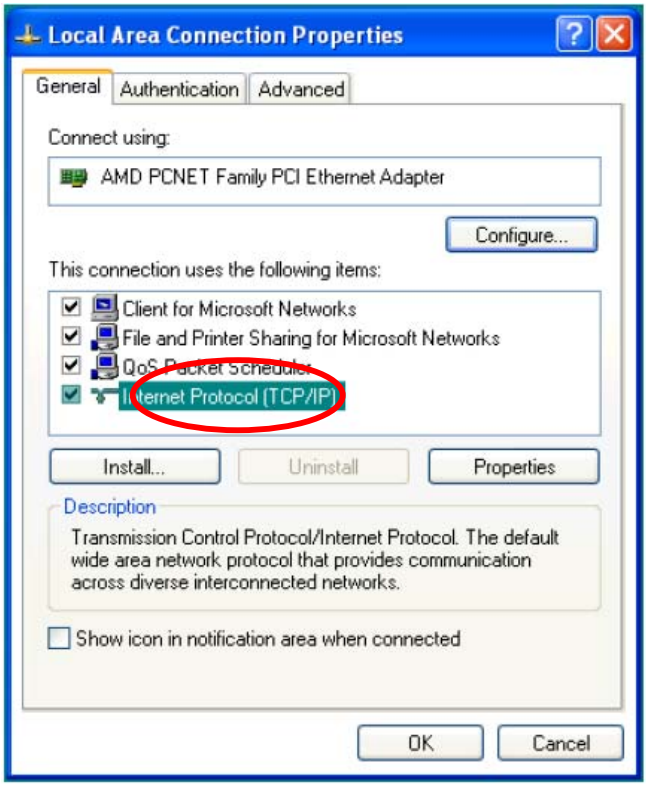
- To connect the SVD-3020 to the user PC, the network setting of the user PC must be verified as in the following:



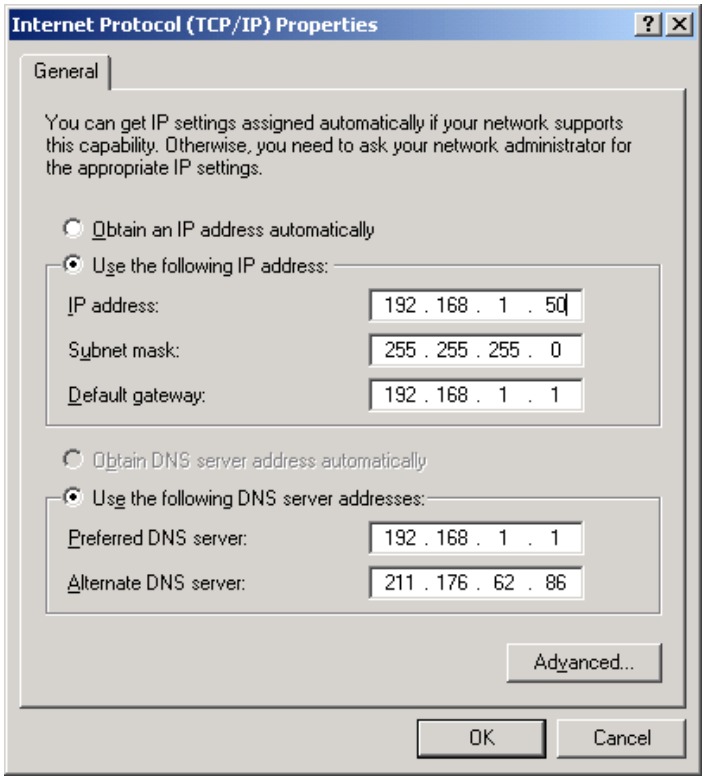
1) Go to 'Start' -> 'Settings' -> 'Control Panel', then select 'Network and Internet Connection'



2) Click Local Area Connection



3) Check the properties of Internet Protocol [TCP/IP]


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 50
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 1 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 1 . 1
Alternate DNS server: 211 . 176 . 62 . 86
Advanced...
OK
Cancel

Network Setting of User PC

4) Setup IP Address, Subnet Mask and Gateway in the user PC with 192.168.1.50, 255.255.255.0 and 192.168.1.1 as it is shown in the picture above.

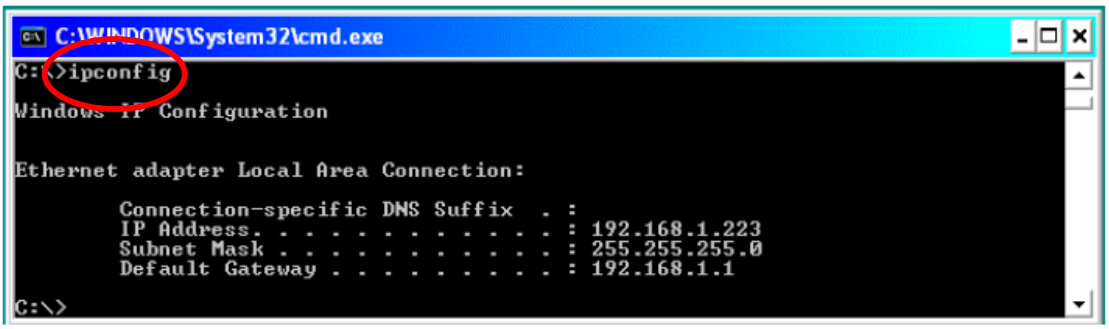
• Caution

- To activate SVD-3020, the user PC must have the same network setup status as it is preset in the SVD-3020. But when you assign the IP address, please be careful not to use the default IP written on the back side of the video server (192.168.1.10), since the same default IP address is allotted to all products.

- Basic network setting values of SVD-3020 are:

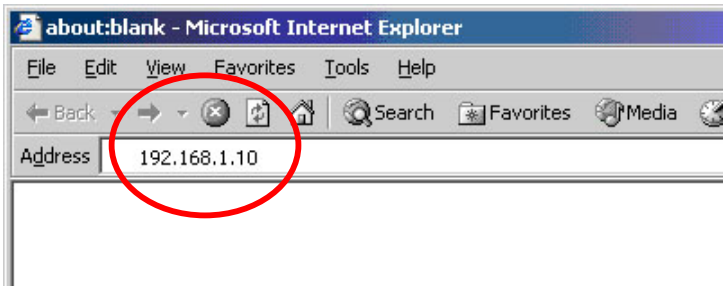
- ▶ **IP Address : 192.168.1.10**
- ▶ **Subnet Mask : 255.255.255.0**
- ▶ **Gateway : 192.168.1.1**

• **After network setting of a PC, you can verify the network status as following:**


C:\WINDOWS\System32\cmd.exe
C:\>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.1.223
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
C:\>

1) Go to ‘Start’ -> ‘Run’ ->input ‘cmd’
2) When a DOS window appears as above, input ‘ipconfig'
3) The display shows the current network setting of a PC.

3.2.2. Operation of the Web Viewer (URL 192.168.1.10)


about:blank - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address 192.168.1.10

Start a Web Browser

1) Start a Web Browser and input 192.168.1.10 in URL and click ‘Enter’. Then, a user log-in page appears. In case, it does not open, reset the video server (click the ‘Reset hole’) to bring it to the default value, and reboot it.
2) When the ActiveX Code for ‘vg3xview_viewer’ pops up, click ‘yes’, then a message window shows as below.

Internet Explorer - Security Warning
Do you want to install this software?
Name: vg3xview_viewer
Publisher: Seorim Technology Co., Ltd
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

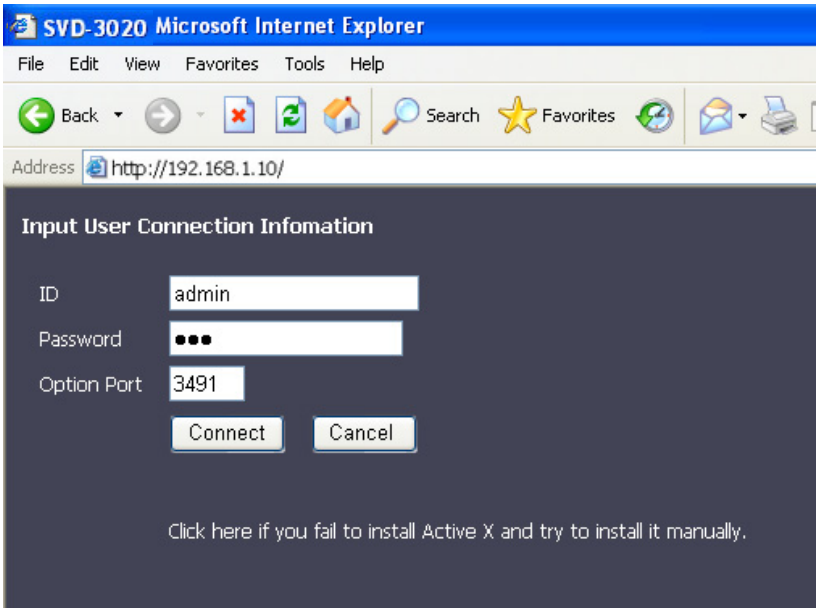
3) Click ‘Install’.

4) When installation of ‘vg3xview_viewer' is completed, the initial ‘Authentication Page’ appears.

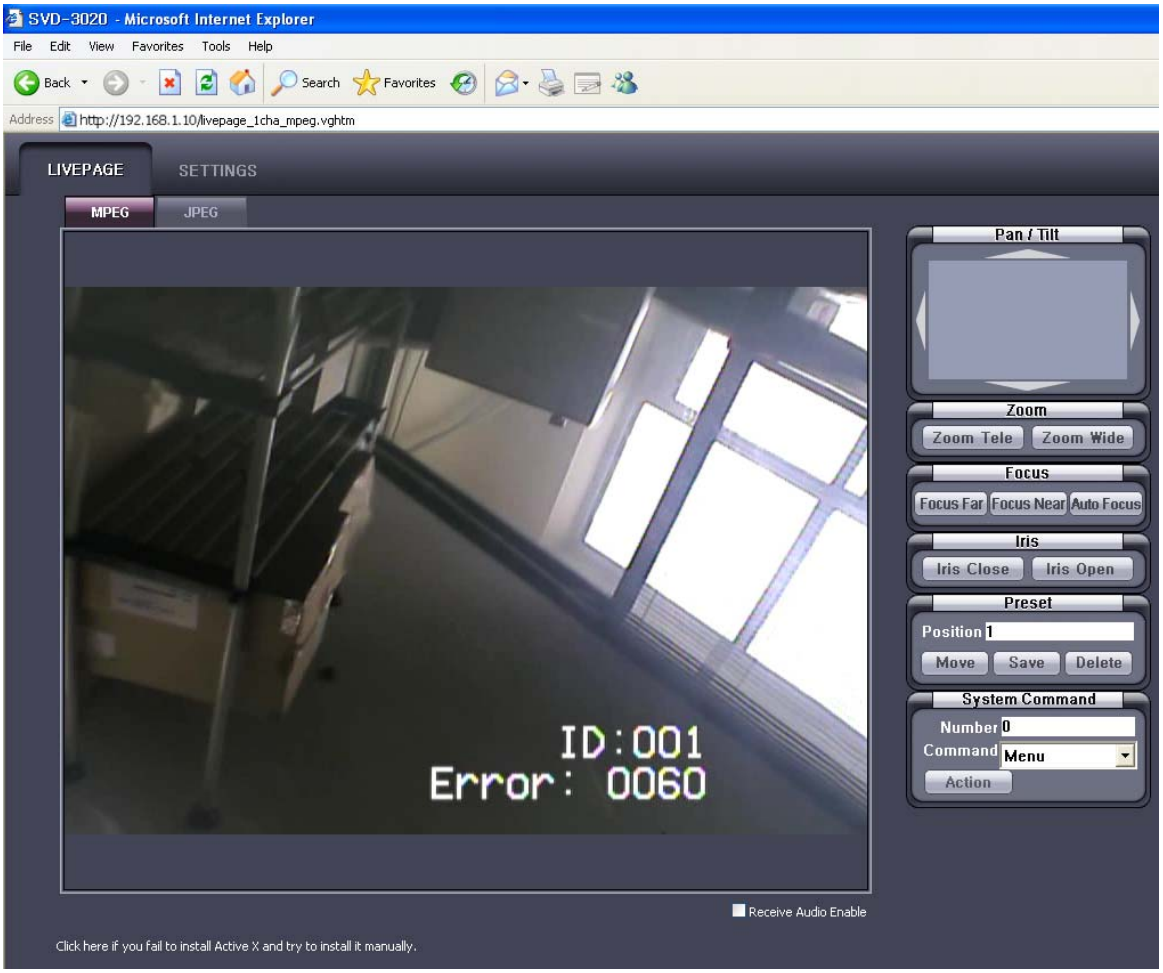
Authentication Page

5) When the Authentication Page appears, input ID and Password and click ‘OK’.

- Default ID: admin
- Password: Ser (‘S’:capital letter, ‘er’: small letter)



6) And then when the Log-in Page appears, click ‘Connect’.



Web Viewer

5) The Web Viewer appears and images of the Camera display.

4. Configuration of Network Environment

4.1. Check-up Network Environment and Installation Type

▶To install SVD-3020 properly, basic understanding of Network Environment is required.

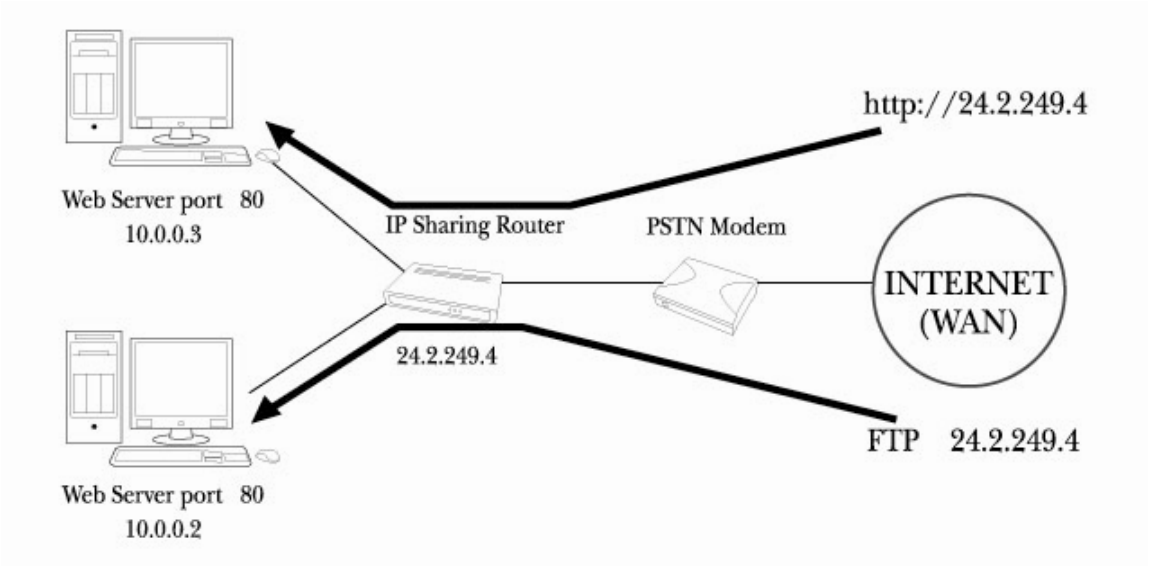
1) Private line Environment

In a huge complex such as Company, University, Research center, public IP addresses are generally used. Under this environment, the user must select a Fixed IP Address for SVD-3020 (->see 3.2.1.-> 7 Network Type) . If DHCP server is available on the network, select 'Dynamic IP Address'. You can get the required information (IP address, subnet mask, gateway, DHCP server) from the network administrator.

2) Broadband (ADSL, Cable, Fiber Optic) Modem Environment

At Home, in the stores and small offices a Broadband modem (DSL, Cable Modem) or a public IP address is usually in use. In order to use several PCs sharing one Public IP address, the user need a specific device called Router. When installing the router, input IP address of SVD-3020 (192.168.1.10) in a DMZ. If a DMZ is not available on the router, go to 'Port Forwarding' or 'NAT' application on the router and setup the ports matching to the port setting of SVD-3020.

.



▶There are two types of installation:

1) Install SVD-3020 without an IP sharing device (Router)

: A router is not required, if a Cable Modem or Leased Line is used,

2) Install SVD-3020 with an IP sharing device (Router)

: A router is required under PPPoE environment. Also with a Leased Line or Cable Modem, the user can use a router. The default IP of SVD-3020 is preset to 192.168.1.10 and Subnet Mask to 255.255.255.0 and Gateway to 192.168.1.1.

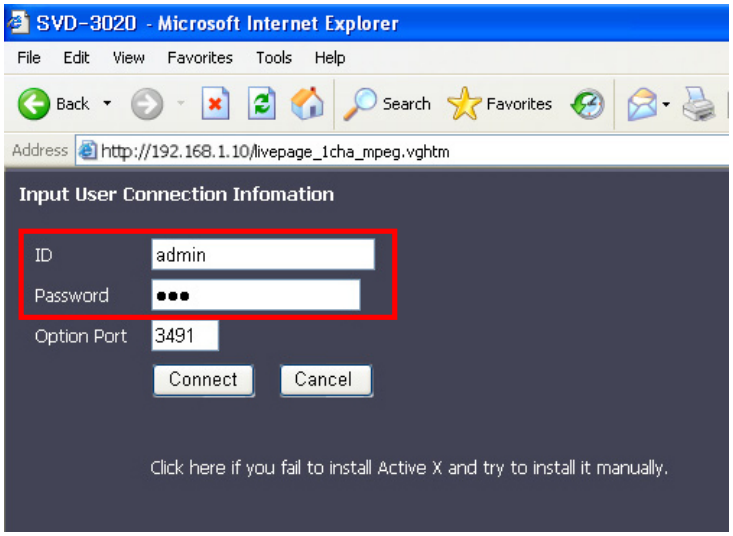
- **Caution 1:** In case of using a Router or an IP Sharing Device, only public IP (Global IP) is used.
- **Caution 2:** A firewall keeps unwanted traffic from the internet away from your LAN computer. Therefore, SVD-3020 may not work properly, if a firewall is installed in a PC and some ports of the SVD-3020 video server are closed behind a firewall. You need to open up a port, a 'tunnel' through the firewall to have network connection. In this case, go to 'Setting' -> 'Control Panel' -> 'Firewall' -> 'Exception' and then click 'Add Port'. Type the port name and number as it is preset on the SVD-3020 video server.

▶The ports being used on SVD-3020 can be verified: 'Log-in Page' -> 'Setting'->'Network Setting' -> 'Port' (->see 3.2.3. Ports Setup)

4.2. Installation without a Router

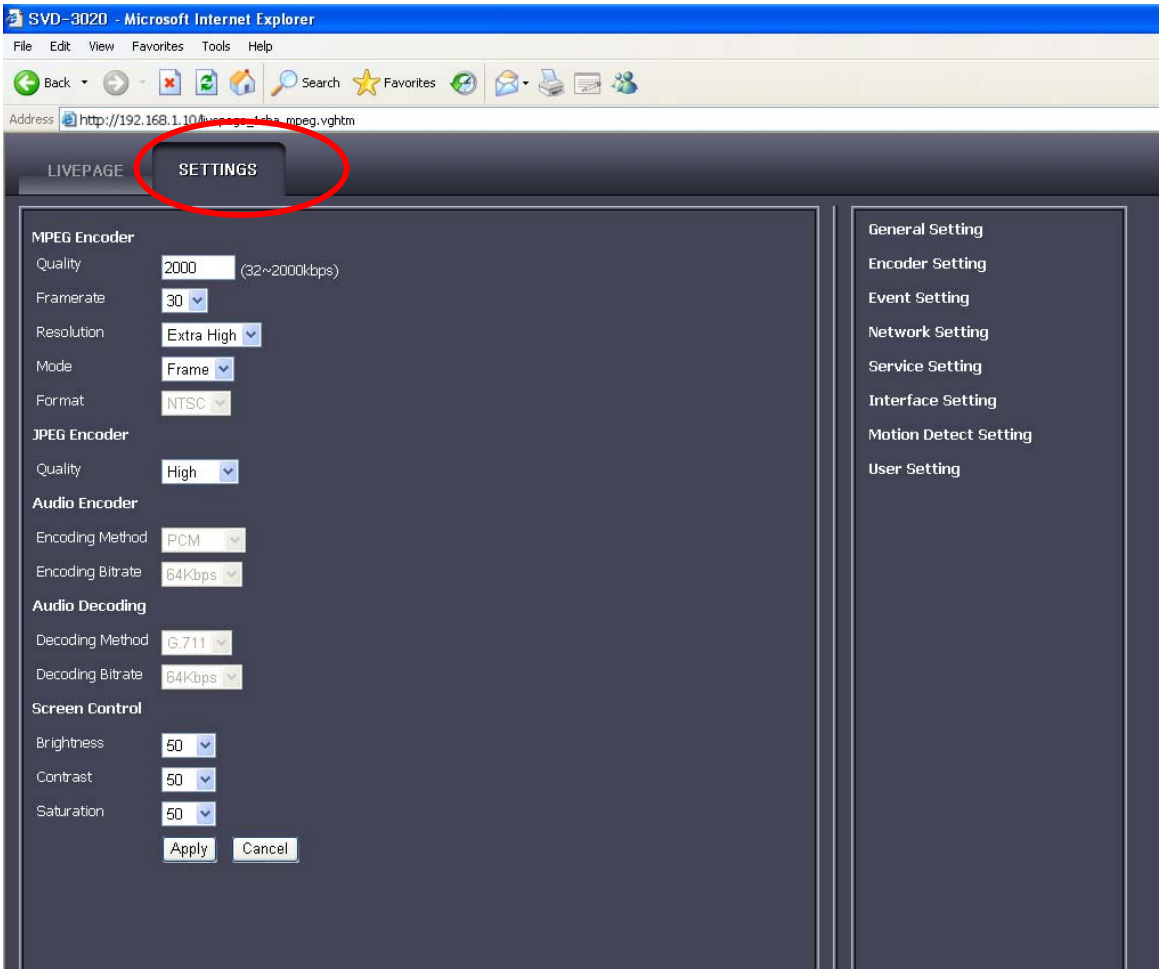
4.2.1. Basic Setup

1) After checking Video, connect SVD-3020 to a PC with a Cross LAN Cable
2) Cable connection and Network Setup should be done as it is instructed in '2.1. Installation and 2.2 network setting'.
3) Run a Web Browser and input 192.168.1.10 in URL and click 'Enter'.
   The Log-in Page appears.


SVD-3020 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.1.10/livepage_1cha_mpeg.vghtm
Input User Connection Infomation
ID admin
Password
Option Port 3491
Connect Cancel
Click here if you fail to install Active X and try to install it manually.

Log-in Page of SVD-3020

4) Put ‘admin’ in ID and ‘Ser’ in the Password line, click ‘Connect’.



Setting Page

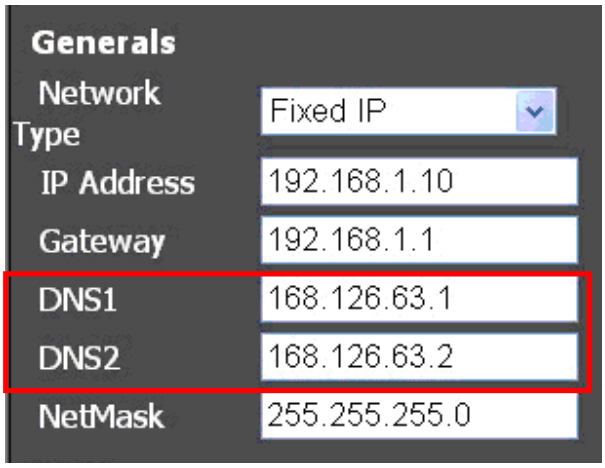
5) Click ‘Settings’, then ‘Setting Page’ displays.
6) Select and click ‘Network Setting’.
7) Select Network type (For SVD-3020→ Fixed IP)
8) Input default IP Address, Subnet Mask, default Gateway of SVD-3020.
9) DNS Address should be given. (->see 3.2.2.DNS Setup.)
10) Setup Port numbers in the Port Setting Lines. (->see 3.2.3.Ports Setup)
11) Click ‘Apply’ to save setting values.
12) After Network Setting, remove the Cross LAN Cable connected between SVD-3020 and a PC.
13) Connect SVD-3020 to a Local Area Network with a Straight LAN Cable.
14) Connect a PC to a Local Area Network with a Straight LAN Cable.

15) Video check

Run a Web Browser on your PC, input default IP of SVD-3020 in URL and click 'Enter',

- When Video is seen, SVD-3020 is correctly set up.
- When Video is not seen, check whether there might be IP confliction in the Network, and re-check the network set values both of SVD-3020, and the user PC.

4.2.2. DNS Setup



▶ **Network Setting -> 'Generals' ->**

- Input First IP for DNS
- Input Secondary IP for DNS (Domain Name Server)

■ 1st and 2nd IP address for DNS should not be the same. They should be different from each other

■ Please check up whether your region DNS (Domain Name Server) is correctly given. The wrong DNS address can cause interruption of email-transmission (see 5.3. Event Setting -> E-Mail)

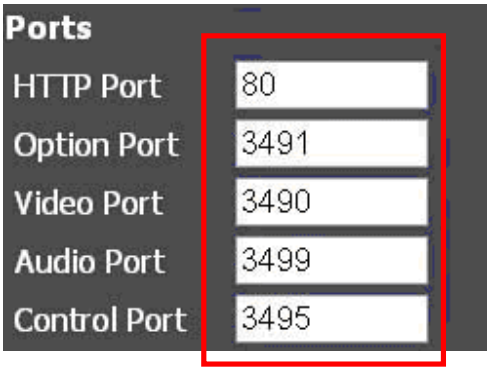
4.2.3. Ports Setup

▶ **Network Setting -> 'Ports' ->**

- Set up Port number in each line of Port Setting.

▶ The default port number is preset as follows: (The user can change the port number, if necessary; ->see 3.3.1.->12)

- HTTP Port (Web Connection Port): Port 80 TCP
- Option Port : Port 3491 TCP
- Video Port : Port 3490 TCP
- Audio Port : Port 3499 TCP
- Control Port : Port 3495 TCP



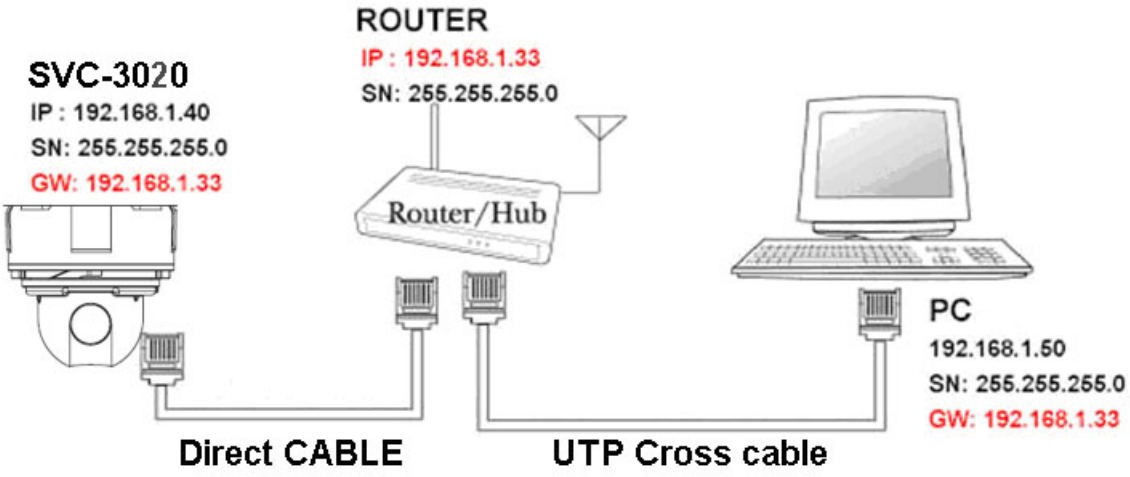
Port Setting

4.3. Installation with a Router

4.3.1. Network Setup with a Router

1) After checking Video, connect SVD-3020 to a PC with a Cross LAN Cable
2) Cable connection and Network Setup should be done as shown in '2.1. Installation and 2.2 network setting'.
3) Go to 'Network Setting'
4) Input default IP Address, Subnet Mask, Gateway of SVD-3020.
5) Input first and secondary IP addresses for DNS. In a case like this SVD-3020 is installed with an IP Sharing Device, type the local IP of the Router in the 2nd DNS Address.
6) Setup Port numbers in the each line of Port Setting.
7) Click 'Apply' to save setting values.
8) After network setting, remove a Cross LAN connected between SVD-3020 and a PC.
9) Connect SVD-3020 to the Router with a Straight LAN Cable.
10) Connect a PC to the Router with a Straight LAN Cable.
11) Forward ports in the router to match the port setting of SVD-3020. Refer to the manual of the router for details.
12) Checkup the network connection:
    Run a Web Browser and input IP address of SVD-3020 in URL and click 'Enter'. The user can change the HTTP port number, if necessary. In this case, you need to additionally input the new port number in URL: **'http:///IP Address:Port Number'**
    For example, if you assign the IP address of SVD-3020 to 192.168.1.10 and change the HTTP port number from 80 to 81, you must input Http://192.168.1.10:81.
13) Check Video of SVD-3020 referring to '3.2.1. VIDEO CHECK' as soon as the server has a network connection with the IP newly set up.

4.3.2 Check the configuration of a ROUTER, SVD-3020 and PC



▶ **Caution: GW of a PC and SVD-3020 must accord with the IP of the ROUTER**

Example:

ROUTER	SVG-3410	LAPTOP/ PC
IP : 192.168.1.33	**IP : 192.168.1.40**	**IP:192.168.1.50**
SN: 255.255.255.0	**SN: 255.255.255.0**	**SN: 255.255.255.0**
	GW: 192.168.1.33	**GW: 192.168.1.33**

5. Display Mode

5.1. Initial Log-in Screen

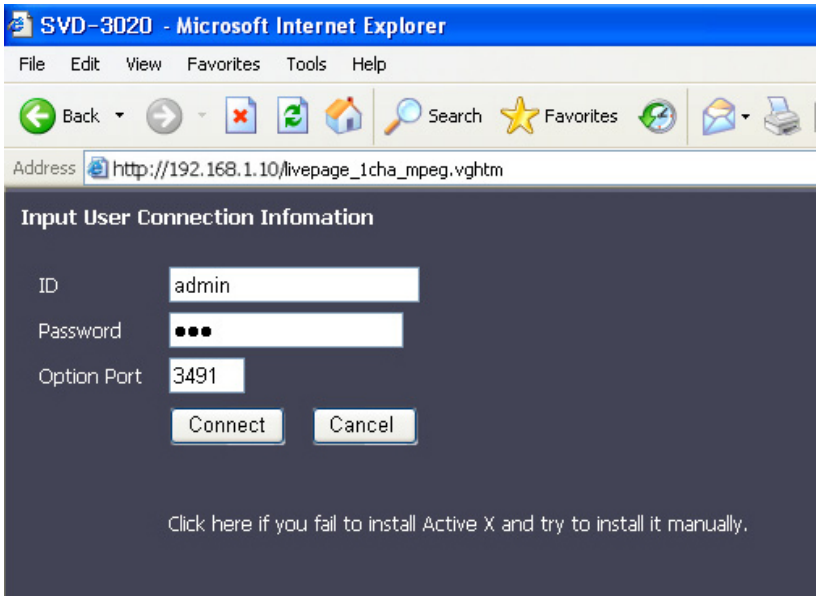
5.1.1. Installation of the Web Viewer

1. Internet Explorer browser starts.
2. When the ActiveX Code pops up, click ‘yes’, then a message window shows as below.

Internet Explorer - Security Warning
Do you want to install this software?
Name: vg3xview_viewer
Publisher: Seorim Technology Co., Ltd
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

3. Click ‘Install’.
4. When installation of ‘vg3xview_viewer' is completed, the initial Log-in Page appears.

5.1.2. Initial Log-in Screen of SVD-3020


SVD-3020 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.1.10/livepage_1cha_mpeg.vghtm
Input User Connection Infomation
ID admin
Password
Option Port 3491
Connect Cancel
Click here if you fail to install Active X and try to install it manually.

▶ Admin/User Login

When the Log-in Page appears, input ID and Password and click ‘Connect’.

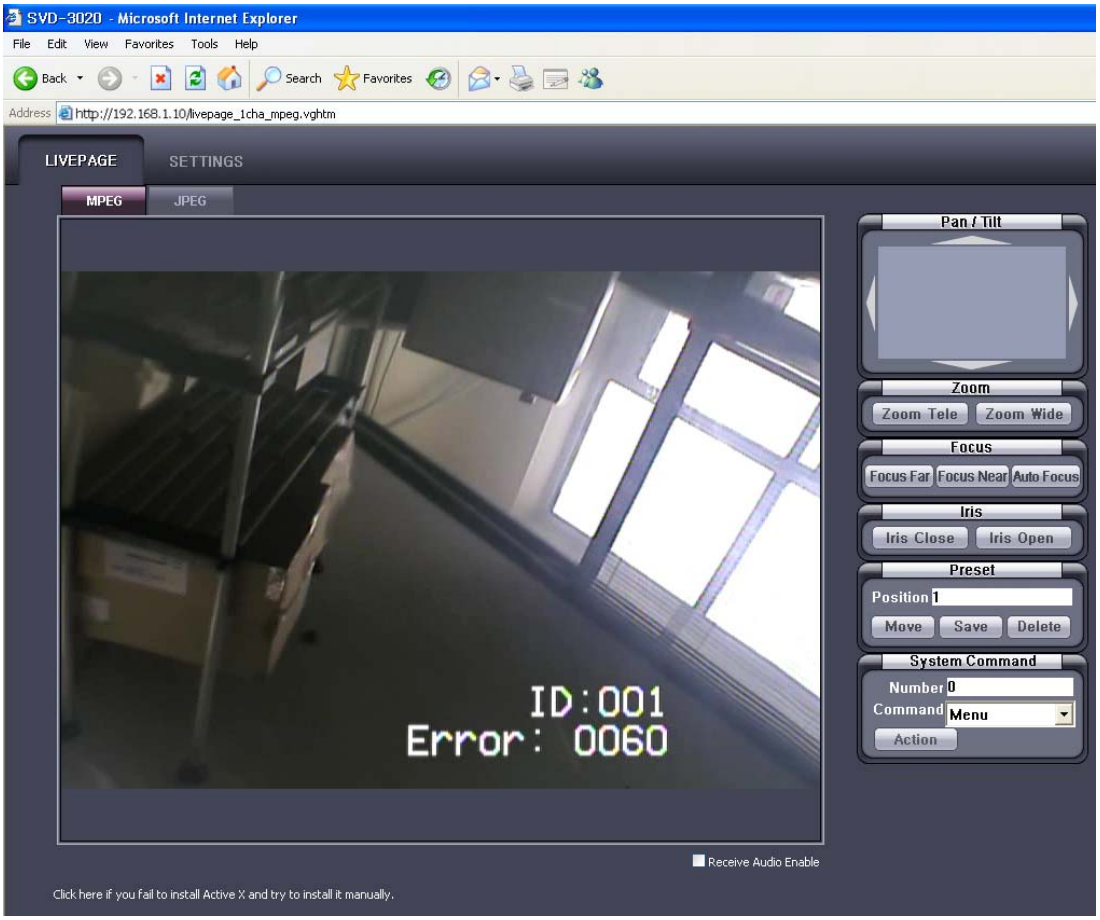
Initial Log-in setting is:

- Default ID: admin
- Password: Ser (‘S’:capital letter, ‘er’: small letter)

■ Caution: Only the Administrator is authorized to reset the 'Setting Values'.

5.2. Live Page

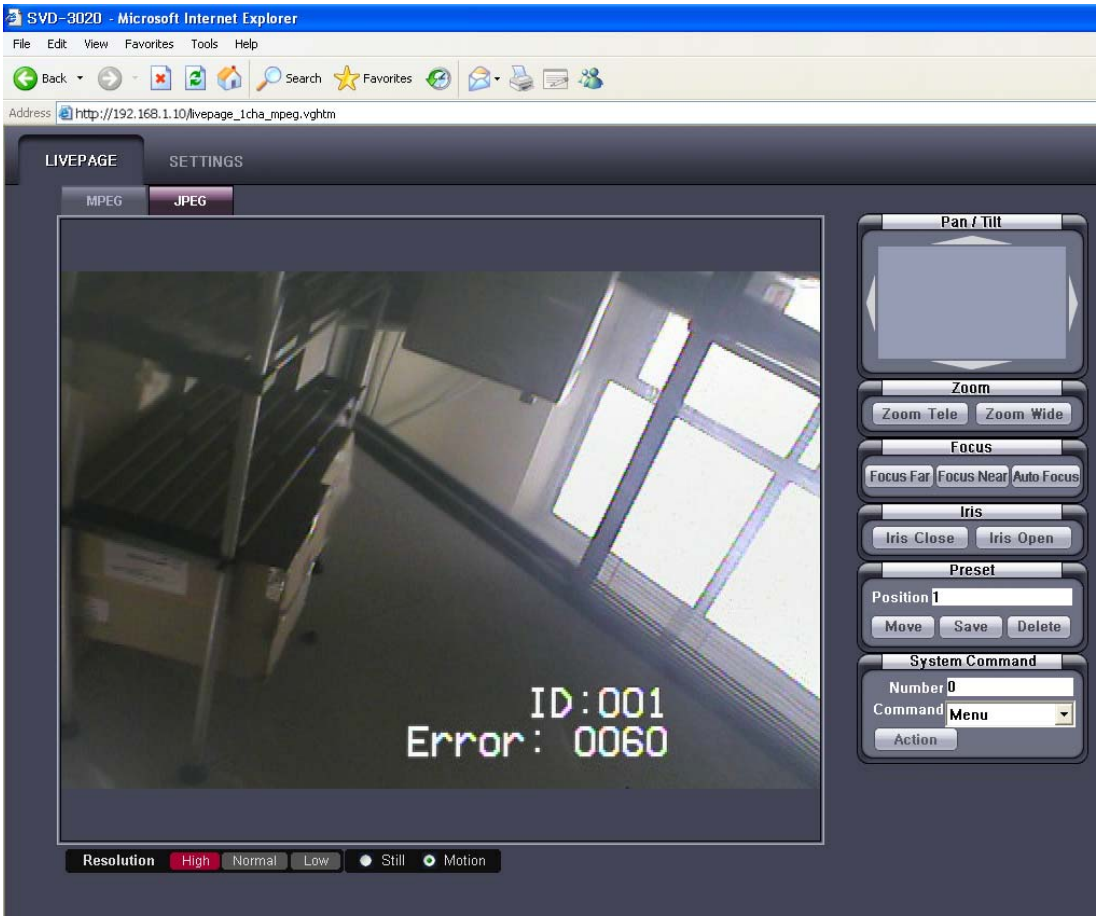
5.2.1. MPEG4 Screen Mode



5.2.2. JPEG Screen Mode

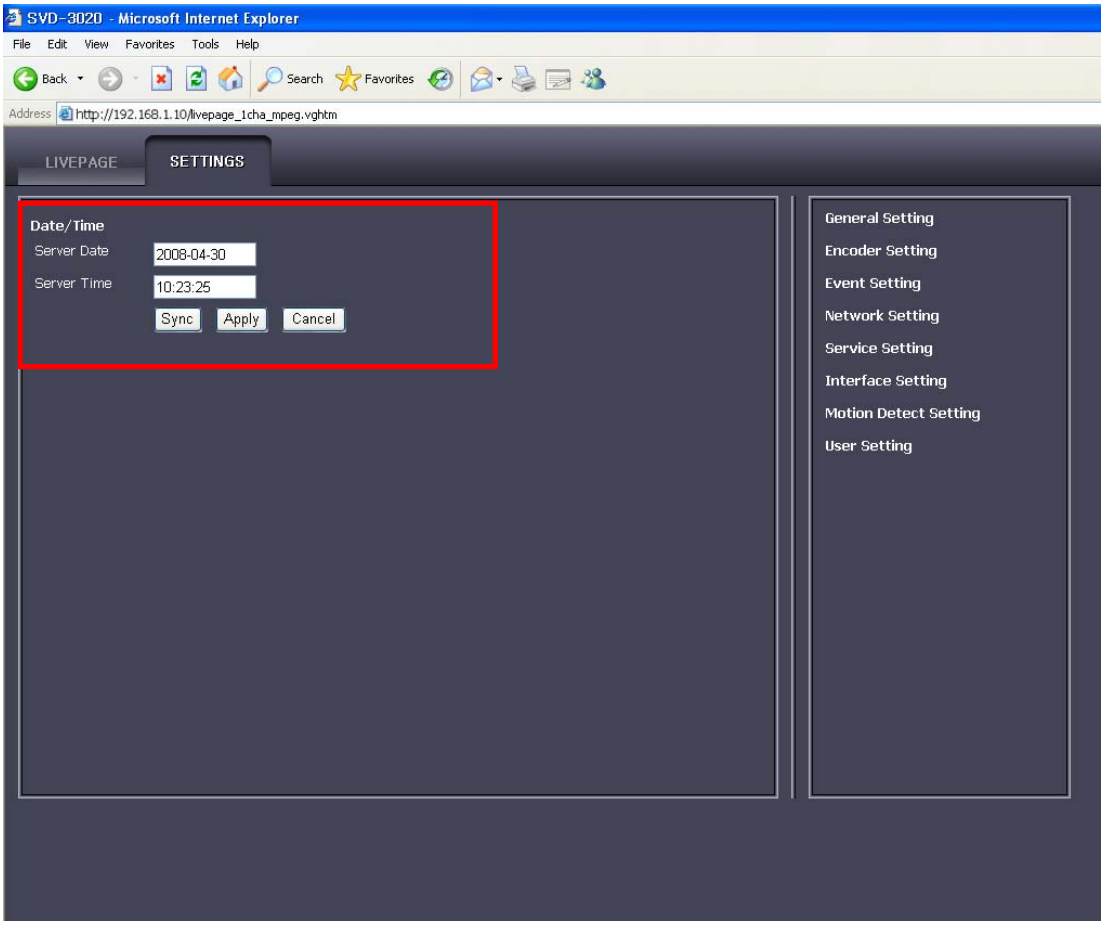
To change the setting values, you can move into ‘SETTINGS’.

In the ‘LIVE PAGE’, you can monitor video images transmitted from 1 channel.


SVD-3020 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.1.10/livepage_1cha_mpeg.vghtm
LIVEPAGE
SETTINGS
MPEG
JPEG
ID:001
Error: 0060
Pan / Tilt
Zoom
Zoom Tele
Zoom Wide
Focus
Focus Far
Focus Near
Auto Focus
Iris
Iris Close
Iris Open
Preset
Position 1
Move
Save
Delete
System Command
Number 0
Command Menu
Action
Resolution
High
Normal
Low
Still
Motion

6. Admin Setting Mode

6.1. General Setting



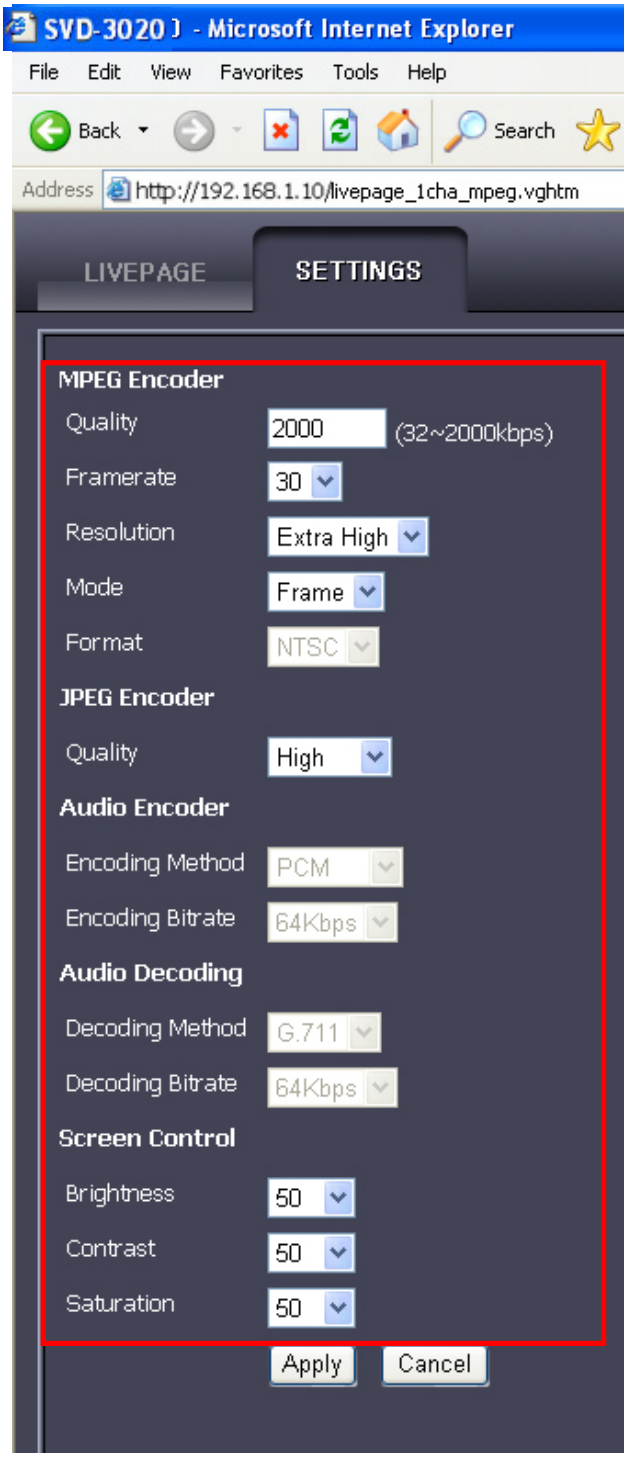
General Setting

- **Date/Time**

  1) Server Date : shows the date of operation

  2) Server Time: shows real time of operation

6.2. Encoder Setting



Encoder Setting

• **MPEG-4 Encoder**

1) Quality: You can adjust the quality of the live video.

30~2000kbps in the Frame mode

30~2000kbps in the GOP mode

2) Frame Rate: The frame rate can be setup.

NTSC : 30, 15, 10, 7.5, 6 / PAL : 25, 13, 8, 6, 5

3) Resolution: The resolution of the live video can be setup.

NTSC : 352x240, 176x144 / PAL: 352x288, 176x144

4) Mode: The live video can be set alternatively in the frame or GOP mode.

5) Format: The video format can be setup when a camera is compatible with PAL and NTSC. (Usually, the format is selected automatically: PAL/NTSC, according to the type of camera,)

• **Audio Encoding**

1) Encoding Method: shows the method of encoding

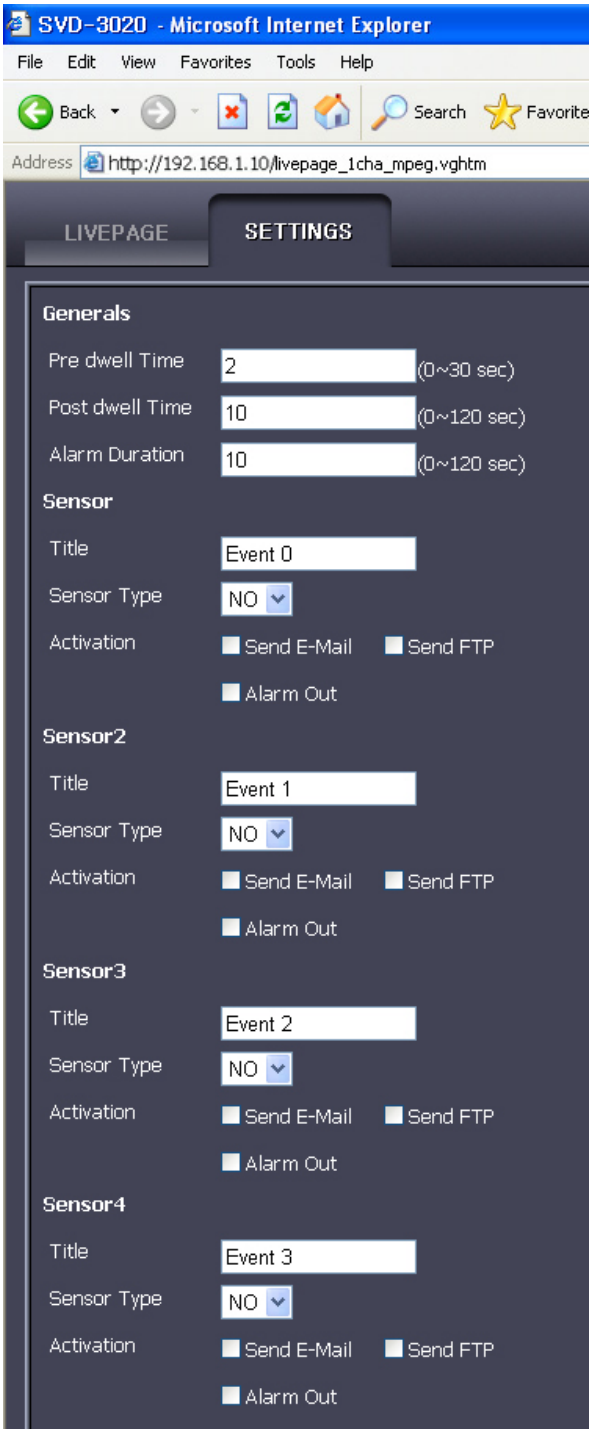
2) Encoding Bit Rate: shows bit rate of encoding

• **Audio Decoding**

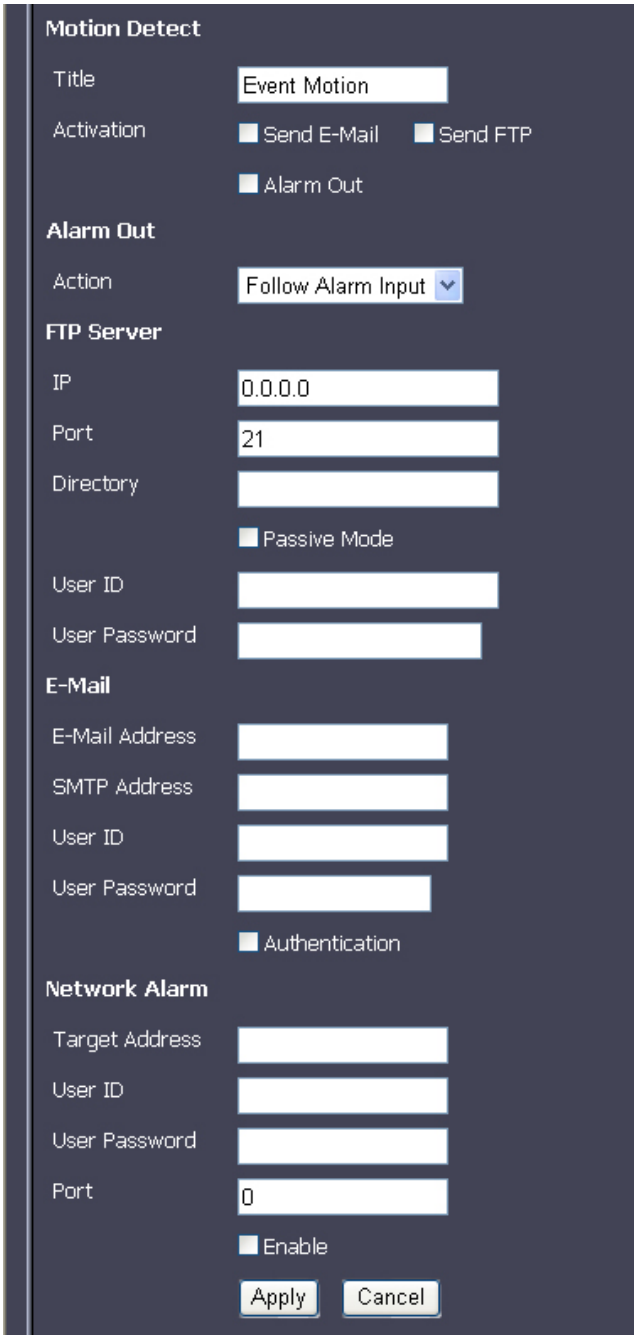
1) Decoding Method: shows the method of decoding

2) Decoding Bit Rate: shows bit rate of decoding

6.3. Event Setting



Event Setting



Event Setting

- **Generals**

1) Pre Event dwell time:

When an alarm occurs, recording time before the occurrence of the alarm can be setup. (0~30 sec.)

2) Post Event dwell Time:

When an alarm occurs, recording time after the occurrence of the alarm can be setup. (0~120 sec.)

3) Alarm Duration:

The duration of the alarm can be setup (0~120 seconds)

• **Sensor:**

- Title : Assign the title of each event. On the occasion of a Sensor Event, a title can be given to an alarm display window (The number of typed letters is limited up to 32)
- Sensor Type is selective:
  NO (Normal Open Sensor)
  NC (Normal Close Sensor)
- Send FTP : On the occasion of a Sensor Event, the user can save the video images on the assigned FTP Server.
- Send E-Mail : On the occasion of a Sensor Event, the user can send an email to the assigned Email Address.
- Alarm Out : On the occasion of a Sensor Event, Alarm Out function can be activated.

• **Motion Detect:**

- Title : On the occasion of Motion Detect, a title can be given to an email.
- Send FTP : On the occasion of Motion Detect,, the user can save the video images on the assigned FTP Server
- Send E-Mail : On the occasion of Motion Detect, the user can send an email to the assigned Email Address.
- Alarm Out : On the occasion of Motion Detect, Alarm Out function can be activated.

• **Alarm Out:**

- Follow Alarm Input : Alarm Out is operational only when Alarm Input is given.
- Always On: Alarm Out is always operational regardless of Alarm Input.
- Always Off : Alarm Out is always non-operational regardless of Alarm Input.

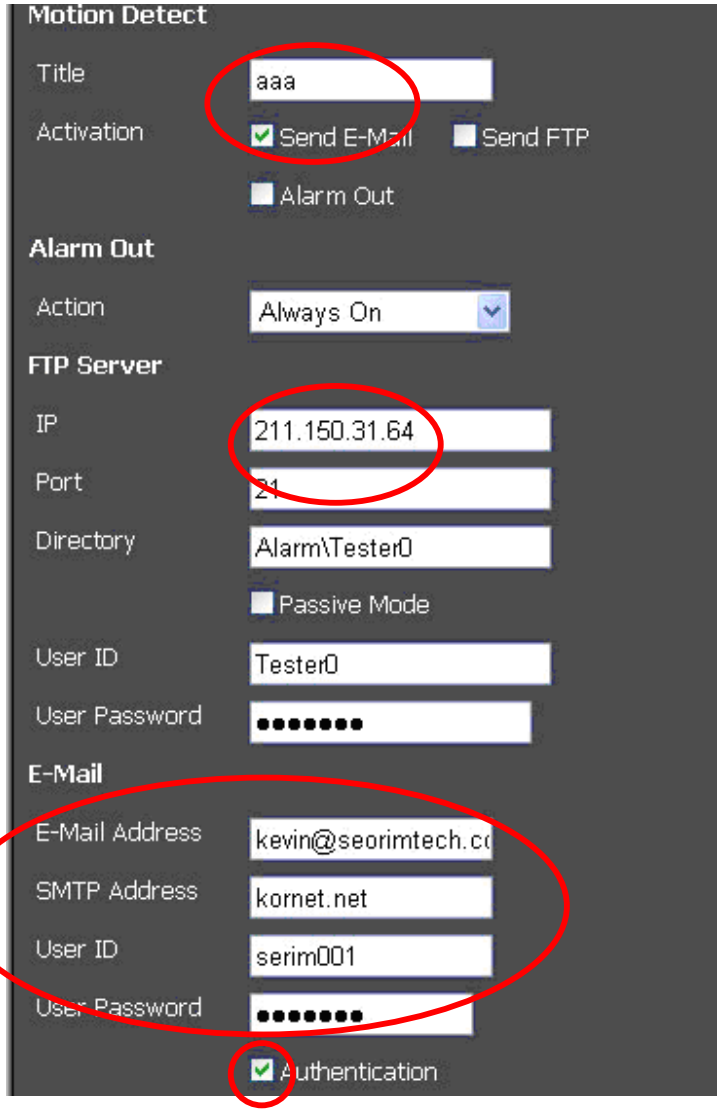
• **FTP Server** :

The IP and directory of FTP server can be setup. The user ID/ and Password of FTP server can be setup.

• **E-Mail** :

The user can assign the E-mail address to receive the notification when an event occurs. To activate

this functionality, SMTP, user ID, and user password should be properly setup as follows.



▶ Check up the following to operate email-sending function properly.

• On the Motion Detect mode → Activate Send E-mail function

• On the E-Mail mode

- E-Mail Address: input email address of the receiver
- SMTP Address: input SMTP address of the sender

* SMTP (Simple Mail Transfer Protocol): a protocol for sending e-mail messages between servers.

- User ID / User Password : input ID/PW of SMTP to make access authorized

• Activate Authentication

• **Network Alarm**:

- Target Alarm : input network address of Alarm
- User ID / User Password: input ID/Password of Network alarm
- Port : input Network Alarm port

6.4. Network Setting

Network Setting

- **General:**

  The IP, Broadcast, Netmask, Gateway, DNS1, DNS2, and SMTP can be setup.

- **Ports**:

The port number of HTTP Port, Option Port, Video Port, Audio Port, and Control Port can be setup.

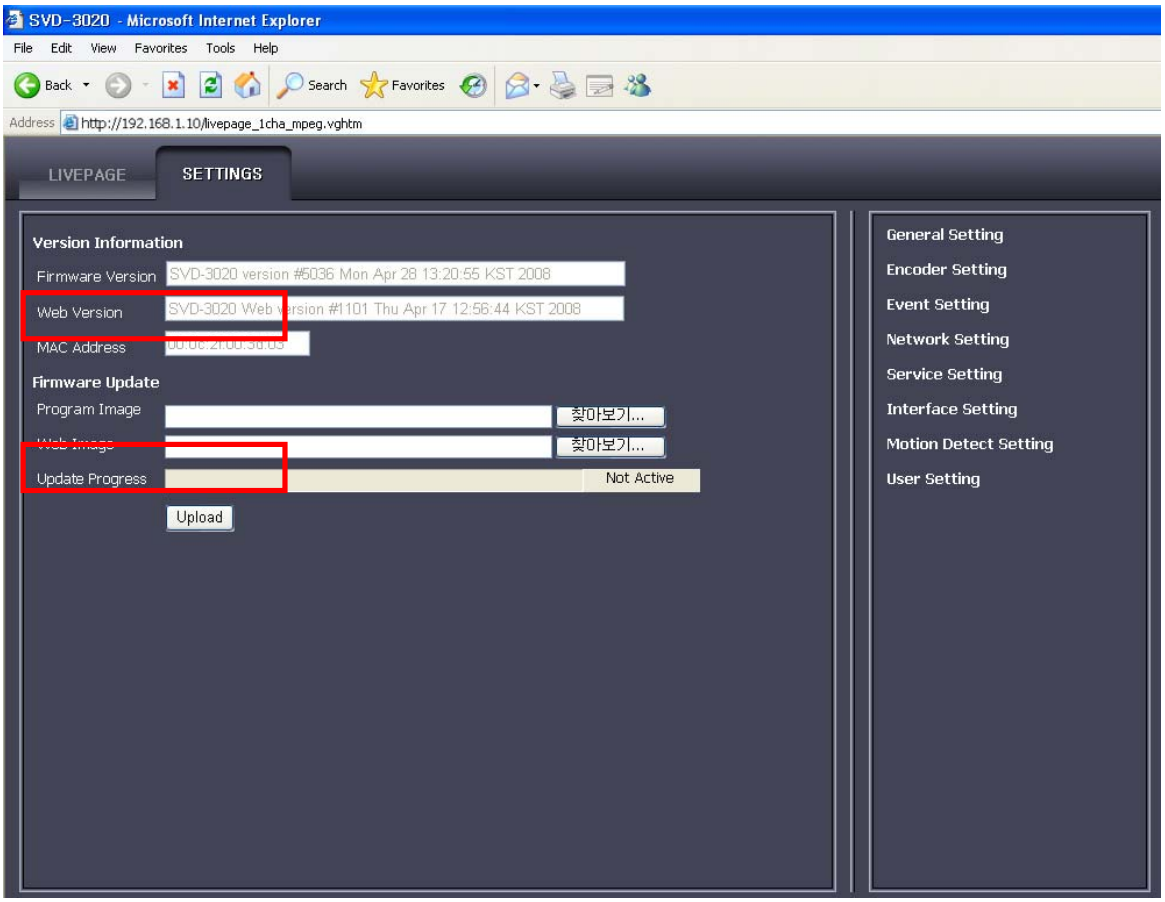
• ISP Option:

- Input ISP ID
- Input ISP Password

• DDNS Option:

- DDNS Type
- ID
- Password
- Hostname

6.5. Service Setting



Service Setting

• **Version Information**

Firmware Version

MAC Address: MAC address of a video server

• **Firmware Update**

How to update Firmware from a distance:

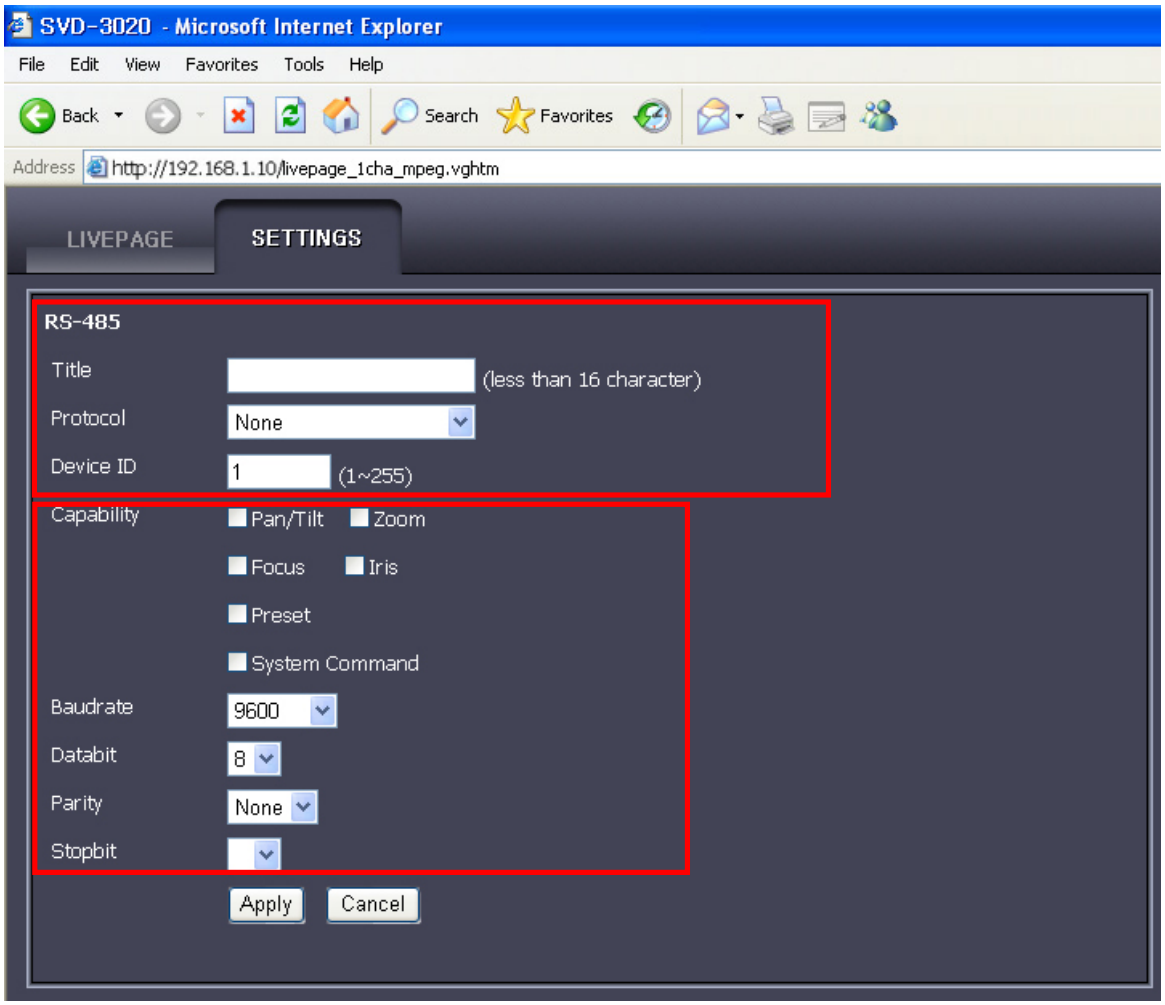
1) Download the newest software from the web site which provides the firmware update file and save it in a PC.

2) Click 'Browse' and select the update firmware file in the search window.

3) Click ‘upload’ and wait until the window shows a message of completion, and then reboot the video server.

■ Caution: While update is in the process, do not close or re-open a window. Also power disconnection can cause fatal damage.

6.6. Interface Setting



Interface Setting

• RS-485

1) Title: less than 16 letters

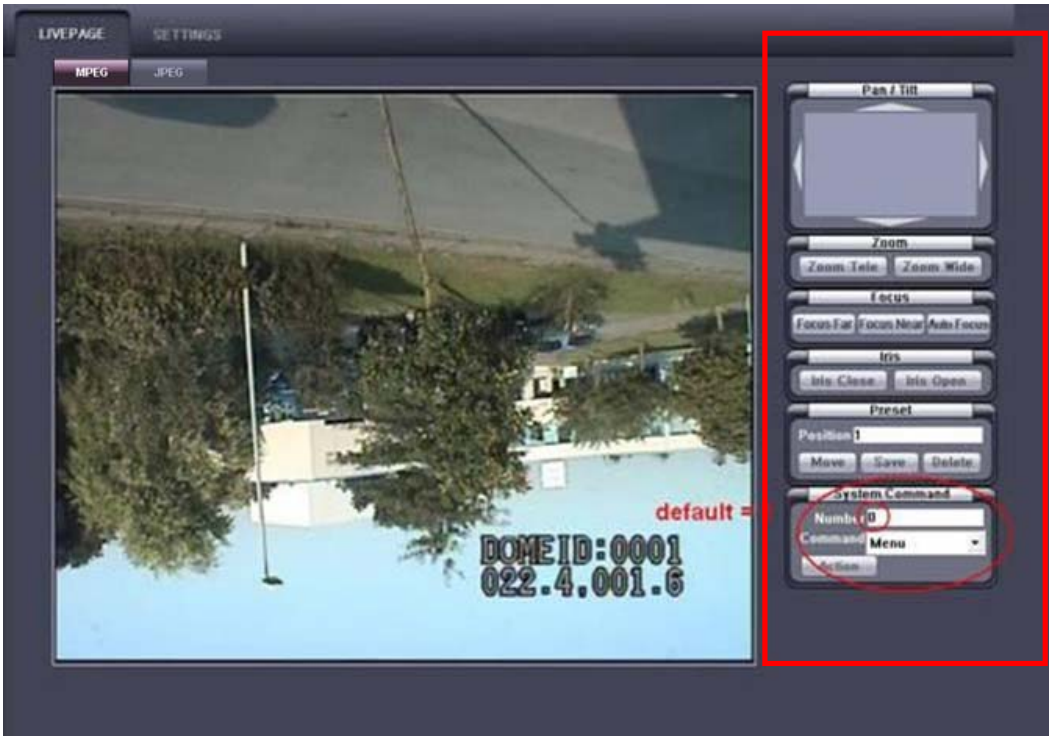
2) Protocol:

Select a manufacturer of the camera or P/T/Z receiver. As the P/T/Z protocols are varied according to the manufacturers. It must be set up correctly. If not, P/T/Z function does not work properly.

3) Device ID: shows a unique ID of each camera

4) Capabilty: According to the type of camera, some specific features can be set up and operated. Click the feature that the user wants to activate.

▶ PTZ Controller



▪ **Pan/Tilt:** If the camera supports PTZ function, the user can set up and control the Degree of Pan Rotation and Range of Tilt on the PTZ Controller of the Live Page.

▪ **Zoom:** activates Zoom function in two modes: 'Zoom wide' and 'Zoom tele'

▪ **Focus:** activates Focus function.

▪ **Iris :** The camera lens has Iris function that optimizes the brightness of the screen

▪ **Preset:** The user can designate interesting places and give a number. The number can be saved on the preset mode.

▪ **System-Command:** According to the protocol of the camera, some specific features can be operated on the System Command Mode.

5) Baudrate:

Set up Baudrate to make communication with the P/T/Z receiver.

Please refer to the manual for the P/T/Z receiver to find setting values.

6) Data bit:

Select Data Bits between 7 bits/ 8bits according to the type of camera or P/T/Z receiver.

Please refer to the manual for the P/T/Z receiver to find setting values.

7) Parity:

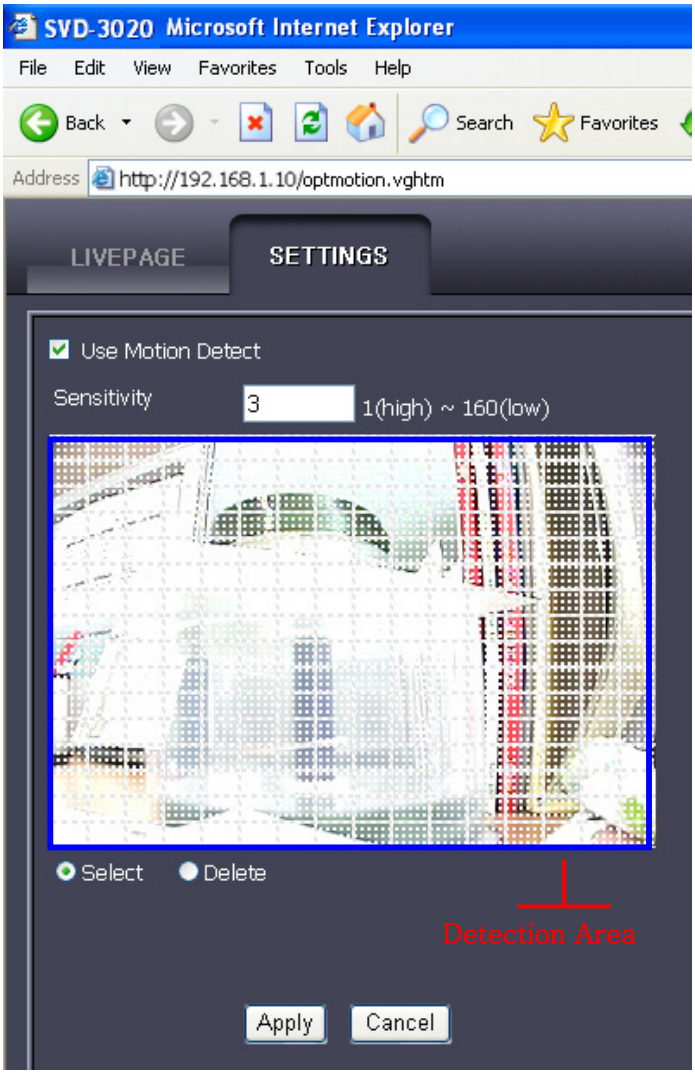
Select Parity Bits among None/Odd/Even according to the type of camera or P/T/Z receiver. Please refer to the manual for the P/T/Z receiver to find setting values.

8) Stop bit:

Select Stop Bits between 1bit/2bits according to the type of camera or P/T/Z receiver.
Please refer to the manual for the P/T/Z receiver to find setting values.

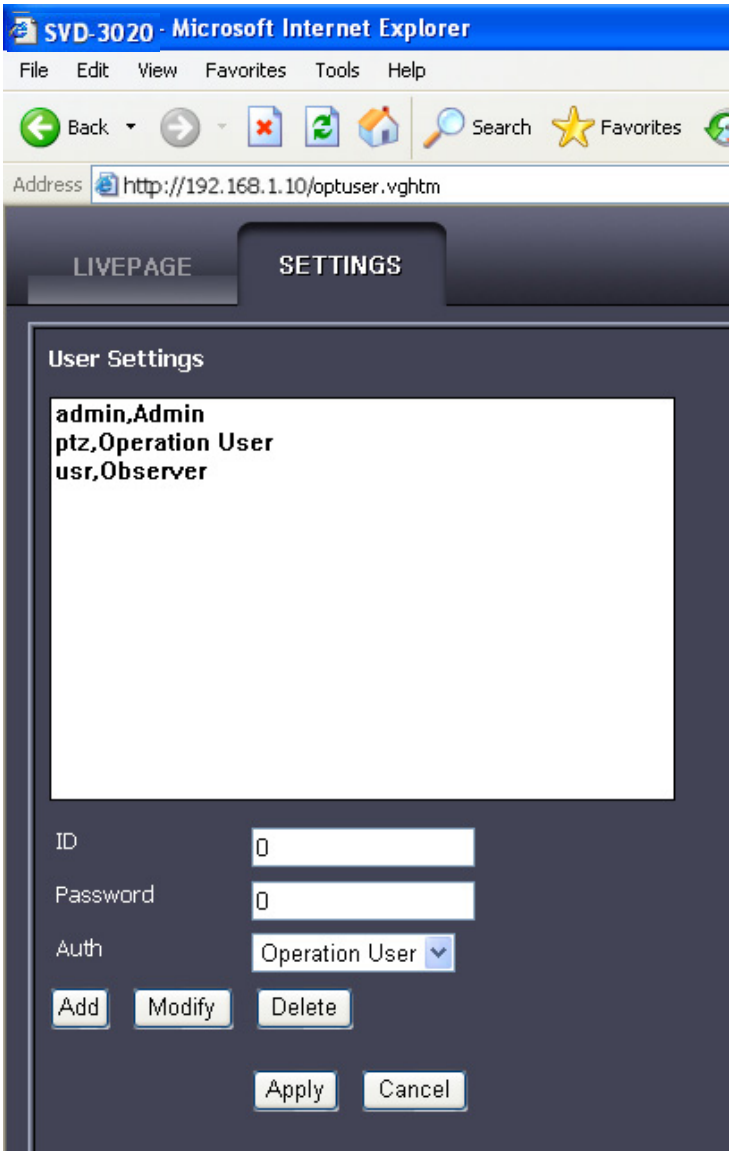
9) Flow Control: shows a method for the data transfer flow control.

6.7. Motion Detect Setting



- It can set up Motion Detection of SVD-3020.
- Use Motion Detect : with a click, the user can activate motion detection function.
- Sensitivity : It can set up the sensitivity of Motion Detection.
- Detection Area: It can set up Motion Detection Area. It is made of lattice squares sized with 16 columns x 16 rows.

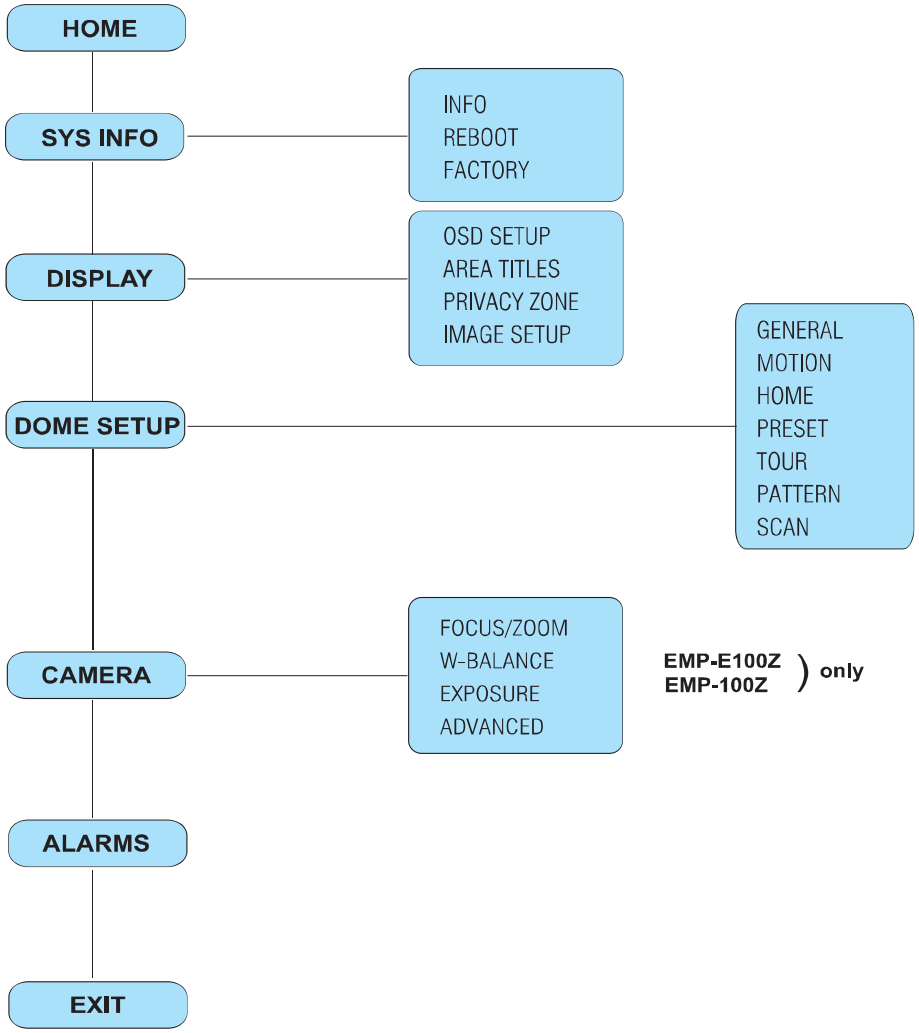
6.8. User Setting



- ID: Input user ID
- Password: Input user Password
- Auth: Select the user type (guest, operation User, Observer, Admin)
- Add: if you want to add a new ID on the user list, click ‘Add’
- Modify: if you want to modify a user ID, click ‘Modify’
- Delete: if you want to delete a user ID, click ‘Delete’

7. Operating Program

7.1. MENU TREE



7. 2. SYSTEM

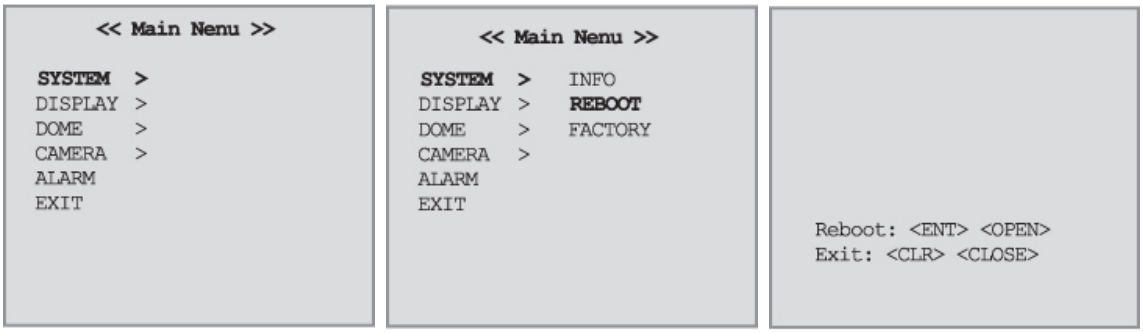
7.2.1. System: Reboot

Reboot the system if it is not operating or if there is no control. Rebooting the system will cycle dome and camera power without changing programmed dome settings.

Use the following steps to display the System Information screen:

1. Use the P/T Panel to position the cursor beside SYSTEM.

2. Click the P/T Panel right button and use the P/T Panel to position the cursor beside REBOOT.
3. Click the P/T Panel right button to open REBOOT window.
4. Press [ENT] or [OPEN] key to reboot the system.



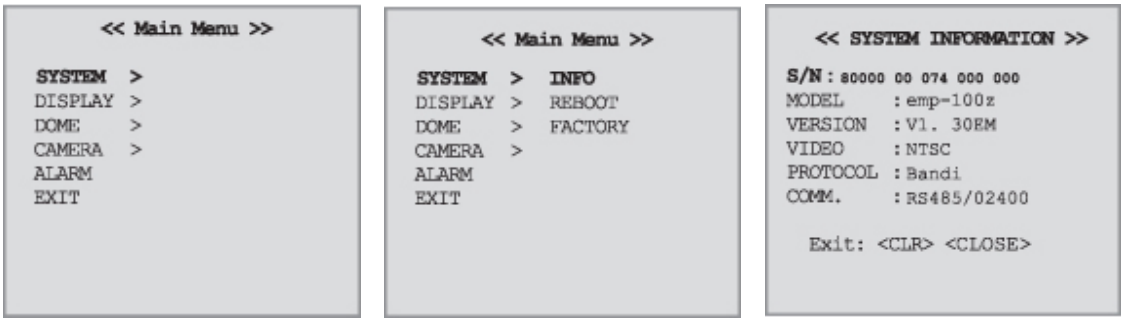
7.2.2. System: Information

The system Information screen displays serial number, software version, and other diagnostic information.

System settings cannot be changed using this screen. This screen is for reference only.

Use the following steps to display the System Information screen:

1. Use the P/T Panel to position the cursor beside SYSTEM.
2. Click the P/T Panel right button and use the P/T Panel to position the cursor beside INFO.
3. Click the P/T Panel right button. The SYSTEM INFORMATION window opens.



7.2.3. System: Factory

Use this function to reset all camera settings to factory default parameters.

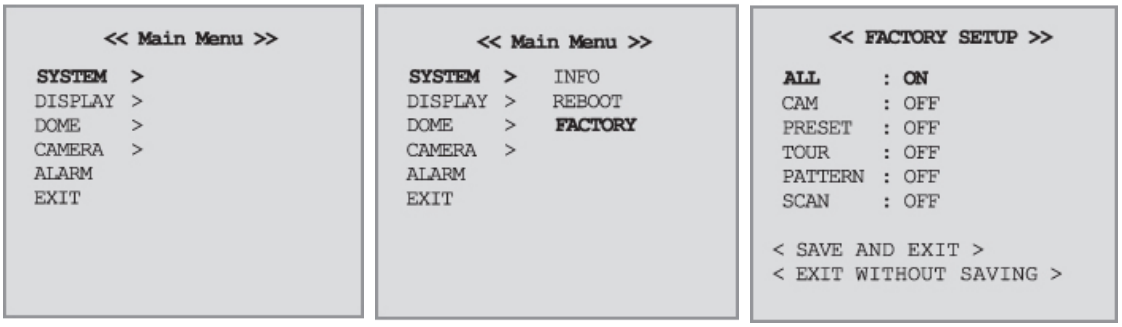
You can reset a specific setting to factory default parameters.

Use the following steps to display the System Information screen:

1. Use the P/T Panel to position the cursor beside SYSTEM.
2. Click the P/T Panel right button and use the P/T Panel to position the cursor beside FACTORY.
3. Click the P/T Panel right button to open FACTORY SETUP window.

4. Select items to be reset.

5. Press [ENT] button or move the P/T Panel to position the cursor beside <SAVE> and then Click the P/T Panel right button.



7. 3. DISPLAY

7.3.1. DISPLAY: OSD SETUP

Display setup allows you to program how labels are displayed on the monitor.

The following labels are available:

TITLE : Identifies area and operation titles.

TIME : Identifies dwell time.

TEMP : Displays temperature.

ZOOM : Displays zoom ratio.

ID : Displays dome ID.

MODE : Displays dome operation mode.

ANGLE : Amount of pan and tilt angle.

The zoom ratio label is displayed when zoom is activated.

The following settings are available for each label:

OFF Label is not displayed when activated.

ON The label is continually displayed when activated.

XX SECONDS The label is displayed for XX seconds after activation. (2~9SEC)

Labels can be placed anywhere on the monitor. This feature allows you to customize the appearance of your monitor screen.

The following labels are not set at fixed positions:

To set a label position:

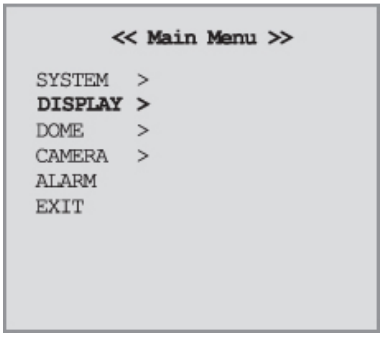
1. Use the P/T Panel to position the cursor beside a label.

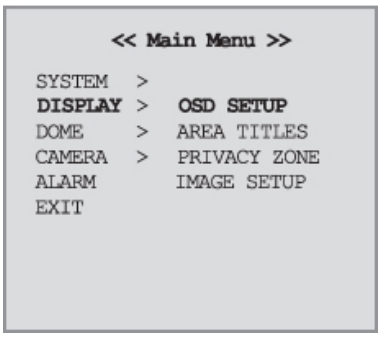
2. Press the [TELE] button or turn the P/T Panel clockwise
3. Use the P/T Panel to move the label up, down, left, and/or right.
4. Press [ENT] or [OPEN] key.
5. Repeat steps 1 through 4 to position other labels.
6. Position the cursor next to <SAVE AND EXIT >Click the P/T Panel right button to save settings and exit menu.
7. Position the cursor next to <EXIT WITHOUT SAVING> Click the P/T Panel right button to exit menu without saving settings.

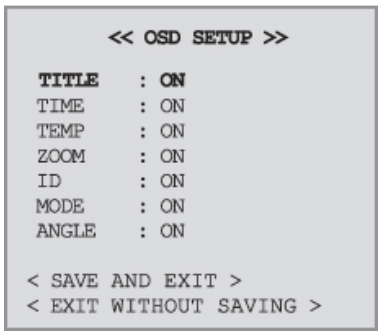
*** Note**

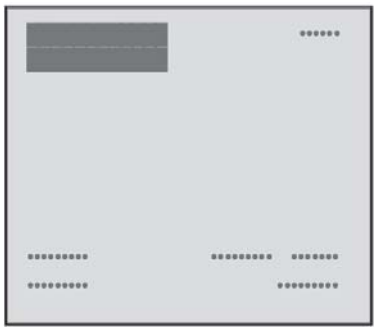
Press <ENT> button to save settings and exit to previous menu.

Press <CLR> or <ESC> button to exit to previous menu without saving any settings at any time.









7.3.2. DISPLAY: PRIVACY ZONE

Window blocking allows a user to program one four-sided, user-defined area that cannot be viewed by the operator of the dome system. The blanked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.

To program a privacy zone:

1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select zone ID. Press the [TELE] button or turn the P/T Panel clockwise to setup azone.
2. Follow the instructions that appear on the screen.
3. The Privacy Zone menu reappears with a saved marked (▉) option .

To disable or clear a Privacy Zone (a zone is enabled automatically when it is programmed):

1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select zone ID.
2. Press the [WIDE] button or turn the P/T Panel counterclockwise to clear.

7.3.3. DISPLAY: AREA TITLES

A zone is a pan area, defined by a left and right limit, on the 360-degree pan plane. The emp-e100 series dome system is capable of 8 area titles, each with a 12-character label.

To program a zone:

1. Use the P/T Panel to position the cursor beside NO.xxx Move left or right to select zone ID. Press the [TELE] button or turn the P/T Panel clockwise to setup START and STOP pan angle.
2. To save START limit angle, press <ENT> or <OPEN>. Automatically STOP limit angle setup window opens.
3. Press <ENT> or <OPEN> button to set STOP limit angle.
4. The Area Title menu reappears with a saved marked (▉) option.

To edit a title:

1. Use the P/T Panel to position the cursor beside TITLE
2. Click the P/T Panel right button.
3. Follow the directions displayed on the monitor.

5. When the label is completed, press [ENT] or [OPEN] to return to the Area title menu

* Note For details, See TITLE EDIT section on this manual

To disable or clear area title (a zone is enabled automatically when it is programmed)

1. Use the P/T Panel to position the cursor beside No.oxxMove left or right to select zone ID.
2. Press the [WIDE] button or turn the P/T Panel counterclockwise to clear.

* Note
The number of area titles depends on the model

7.3.4. DISPLAY: IMAGE SETUP

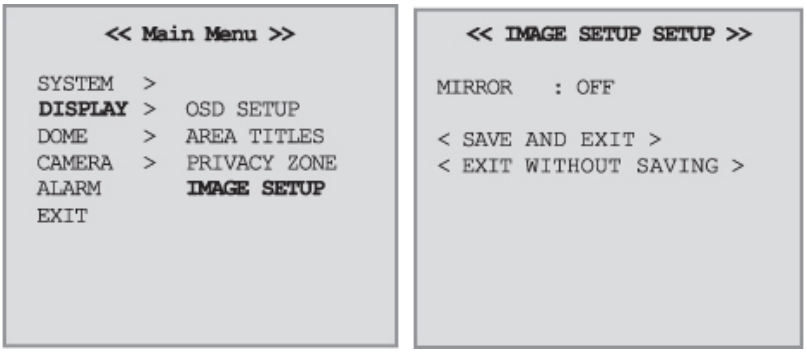
The following four options are available:

OFF normal image

H.MIRROR: left-right reversal image

V.MIRROR: upside-down image

REVERSE: left-right reversal and upside-down image



7. 4. DOME

7.4.1. DOME: GENERAL

BACKUP TASK

This setting defines a specific activity (scan, preset, pattern or another tour) to be performed in the event the power to the dome is cycled.

The following settings are available:

OFF: No action.

ON: (default) The dome resumes its prior activity.

VECTOR SCAN

There are three options :

FAST :

SMOOTH :

MODE 3 :

PRESET SPEED

There are three options:

FAST: 400 deg / sec preset speed.

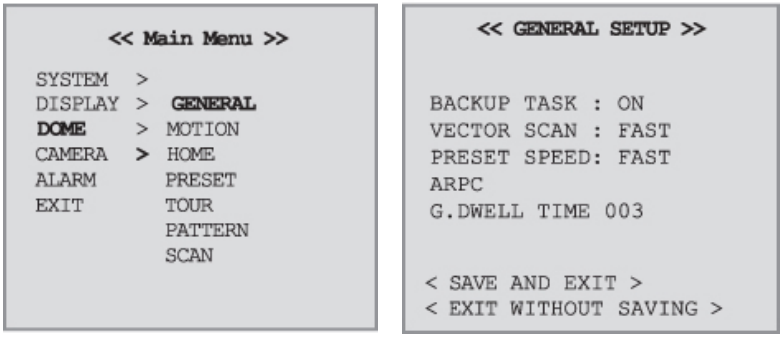
NORMAL: 300 deg / sec preset speed.

SLOW: 200 deg / sec preset speed.

ARPC

Auto Recognition Position

G.DWELL TIME



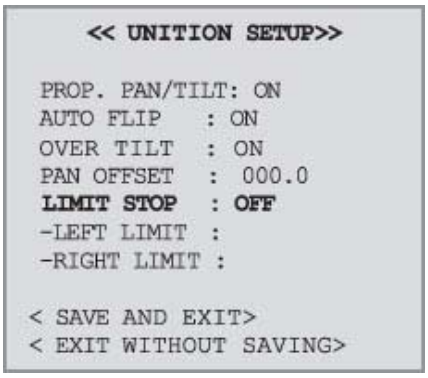
LIMIT STOPS

Limit stops are programmable stops that limit the pan range of the dome. There must be two limits, a left and a right, to define an area. A manual (P/T Panel) pan operation stops when a limit stop is reached.

To set limit stops:

1. Use the P/T Panel to position the cursor beside LIMIT STOP.
2. Press [TELE] or twist the P/T Panel right.
3. Follow the directions displayed on the monitor.

To clear limit stops, set limit stop mode to OFF.



7.4.2. DOME: MOTION

PROPORTIONAL PAN/TILT

Proportional pan/tilt automatically reduces or increases the pan and tilt speeds in proportion to the amount of zoom. At telephoto zoom settings, the pan and tilt speeds will be slower for a given amount of P/T Panel deflection than at wide zoom settings. This keeps the image from moving too fast on the monitor when there is a large amount of zoom.

There are two proportional pan/tilt modes:

ON (default): Enables the proportional pan/tilt mode.

OFF: Disables proportional pan/tilt mode. The pan speed will not depend on the amount of zoom.

AUTO FLIP

When the camera tilts downward and goes just beyond the vertical position, the dome rotates 180 degrees. When the dome rotates (flips), the camera starts moving upward as long as you continue to hold the P/T Panel in the down position.

Once you let go of the P/T Panel after the dome rotates, P/T Panel control returns to normal operation. The auto flip feature is useful for following a person who passes directly beneath the dome.

There are two auto flip modes:

ON (default): Auto flip mode is enabled.

OFF: Auto flip mode is disabled.

PAN OFFSET

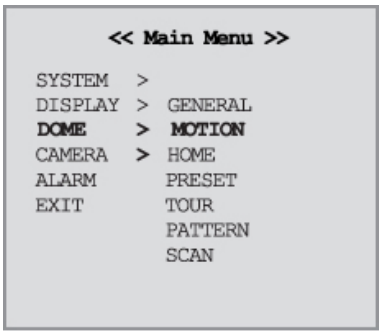
Pan offset is the pan angle from 0 ┌to 359. Pan offset is the pan position you specify to be the 0 ┌point. Pan offset is normally set to magnetic north. Once set, azimuth and compass readings are based on the set Pan offset point.

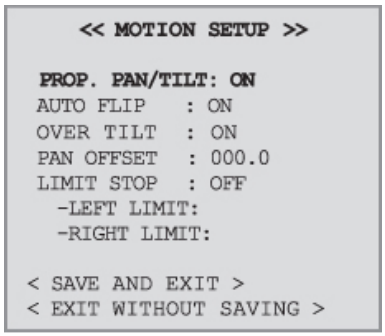
To program Pan offset:

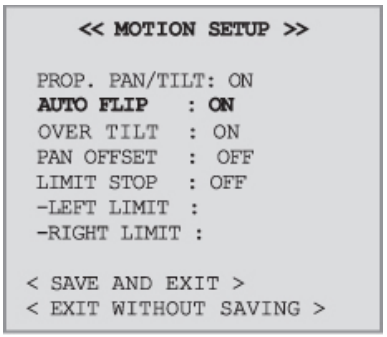
1. Use the P/T Panel to position the cursor beside PAN OFFSET.
2. Press [TELE] or twist the P/T Panel right.
3. Follow the directions displayed on the monitor.

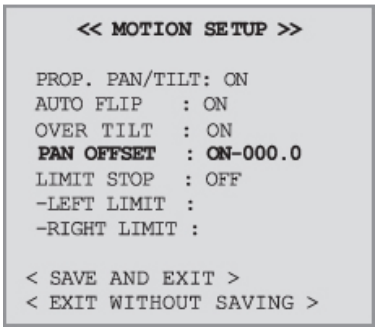
To clear azimuth zero:

1. Use the P/T Panel to position the cursor beside PAN OFFSET.
2. Press [TELE] or twist the P/T Panel right.









7.4.3. DOME: HOME

ACTION / NUMBER

This feature will define the activity when the dome parks. The following settings are available:

HOME: (default) HOME action.

PRESET [NUMBER]: Dome goes to preset [NUMBER].

TOUR [NUMBER]: Dome goes to tour [NUMBER].

PATTERN [NUMBER]: Dome goes to pattern [NUMBER].

SCAN [NUMBER]: Dome goes to scan [NUMBER].

*NOTE

In order to call action preset, tour, pattern or scan, you must save preset , tour, pattern or scan first.

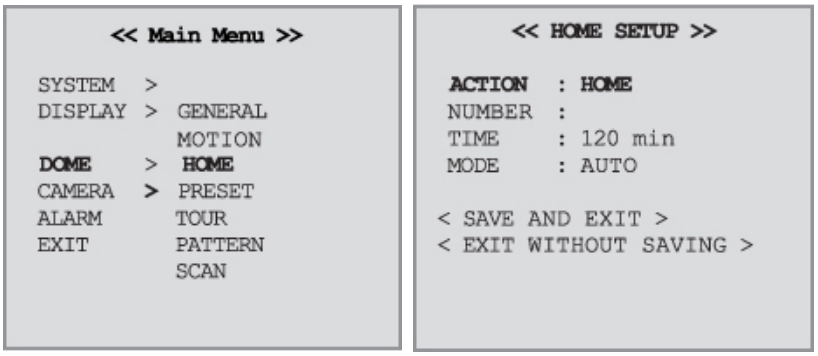
TIME

This feature allows the dome to begin a user specific action after a programmed time of inactivity. Home time can be programmed from 1 minute to 240 minutes (4 hours).

MODE

AUTO(default): enables this feature.

MANUAL: disables this feature.



7.4.4. DOME: PRESET

The emp-e100z dome system has 240 preset positions. Each of the user definable presets can be programmed to use pan, tilt, camera settings, and motion detection.

Use the following steps to program a preset.

1. Select the preset number:

a. Use the P/T Panel to position the cursor on '='(PRESET NUMBER). Press Iris Open.
   The cursor moves to the right.

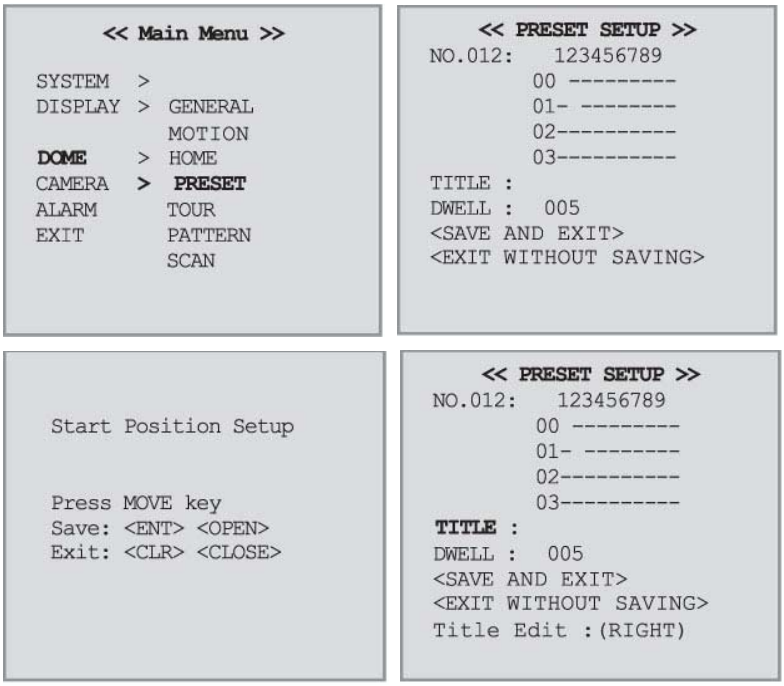
b. Move the P/T Panel up or down to view selections Press [TELE] or twist the P/T Panel right to enter setup.

2. Follow the directions displayed on the monitor to edit the preset scene

3. Edit the preset label. See TITLE EDIT section on this manual.

4. Edit the dwell time.

5. Press [ENT] to save and exit. Or move the P/T Panel beside [SAVE] and Click the P/T Panel right button to save and go to previous menu.



7.4.5. DOME: PATTERN

A pattern is a memorized, repeating, series of pan, tilt, zoom and preset functions that can be recalled with a command from a controller or automatically by a programmed function.

The emp-e100z has 8 user-defined patterns. Pattern length is based upon a fixed amount of time.

To program a pattern:

1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select pattern ID. Press the [TELE] button or turn the P/T Panel clockwise to start to learn.
2. Follow the directions displayed on the monitor.
3. Press <ENT> or <OPEN> button to finish learning.
4. The pattern menu reappears with a saved marked(▉) option.

To edit a title:

1. Use the P/T Panel to position the cursor beside TITLE.
2. Click the P/T Panel right button.
3. Follow the directions displayed on the monitor.
5. When the label is completed, press [ENT] or [OPEN] to return to the previous menu.

* Note For details, See TITLE EDIT section on this manual.

To disable or clear a pattern:

1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select ID.
2. Press the [WIDE] button or turn the P/T Panel counterclockwise to clear.

7.4.6. DOME: TOUR

To program at our:

1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select tour ID. Press the [NEAR] button to setup.
2. To insert items, use following steps:

a. Move the P/T Panel to select a item.

b. Press the [NEAR] button to select a action

(PRESET, TOUR, PATTERN and/or SCAN) and number.

3. Follow the directions displayed on the monitor.
4. Before select a specific item, save it first.

To disable or clear a tour:

1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right toselect tour ID.
2. Press the [NEAR] button to clear.

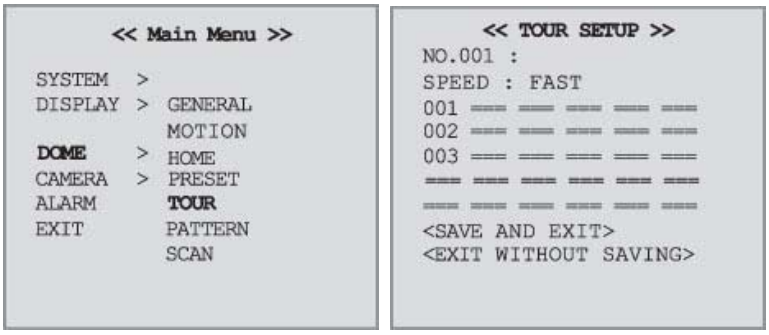
Tour Speed

There are three options.

FAST : 400deg/sec

NORMAL : 300deg/sec

SLOW : 200deg/sec



7.4.7. DOME: SCAN

SPEED

Scan speed is the degrees per second that the dome will pan when in a scan mode. Scan speed ranges from 1(slowest) to 9(fastest). The default setting is 5.

MODE ENDLESS(LEFT/RIGHT): The dome scans endless with fixed tilt angle.

COMING & GOING: The dome reverses direction when a limit stop is reached.

To program a scan:

1. Use the P/T Panel to position the cursor beside MODE. Move left or right to select auto scan mode.
2. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select pattern ID. Press the [TELE] button or turn the P/T Panel clockwise to start to learn.
3. Follow the directions displayed on the monitor.
4. Press <ENT> or <OPEN> button to save left and/or right limit
5. The scan menu reappears with a saved marked(■) option.

To edit a title:

1. Use the P/T Panel to position the cursor beside TITLE.
2. Click the P/T Panel right button.
3. Follow the directions displayed on the monitor.
5. When the label is completed, press [ENT] or [OPEN] to return to the previous menu.

* Note

For details, See TITLE EDIT section on this manual.

To disable or clear a scan:

1. Use the P/T Panel to position the cursor beside NO.xxx Move left or right to select ID.
2. Press the [WIDE] button or turn the P/T Panel counterclockwise to clear.

7. 5. CAMERA

7.5.1. CAMERA: FOCUS/ZOOM

FOCUS

There are two auto focus settings:

AUTO If auto focus mode is set to ON, the camera will focus automatically.

MANUAL Focus is operated manually. To focus, press [NEAR] or [FAR] button on the controller.

TRIGGER(default) If auto focus mode is set to TRIGGER, the camera will focus when zoom functions.

ZOOM SPEED

Zoom speed allows the user to define how fast the dome will go from full wide zoom to the 10X optical zoom.

The default setting is FAST.

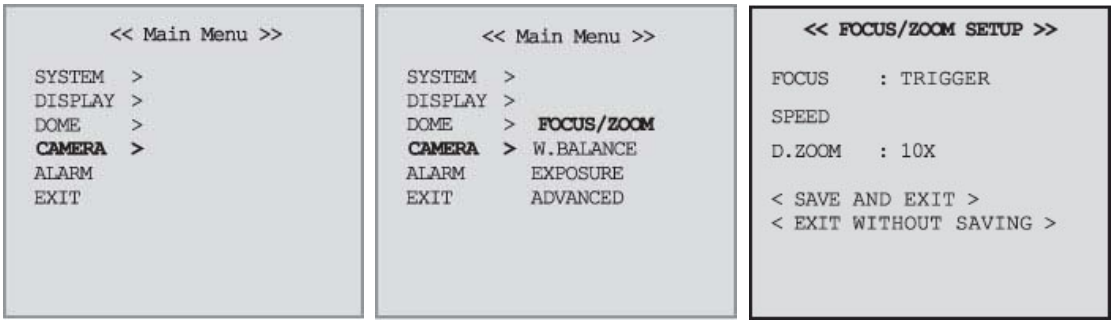
Available settings for zoom speed include the following:

FAST

SLOW

D.ZOOM (ZOOM LIMIT)

Zoom limit allows the user to define a limitation on the amount of telephoto zoom. The default setting is 100X. Zoom (10X optical zoom and 10X digital zoom) can be set for 10X, 20X, …, or 100X.



7.5.2. CAMERA: EXPOSURE

IRIS

AUTO Auto iris is the lens function that automatically opens and closes the iris in response to changing light conditions.

MANUAL Settings ranges from 1 to 100. Increases as the number gets higher.

NOTE: If auto iris is in the auto mode, it will remain that way until the iris is manually opened or closed. The dome will return to auto mode when it is panned or tilted.

SHUTTER (Flickerless)

Shutter speed is the duration of the electronic shutter. Program shutter speed to operate automatically (Auto) or manually (Numeric Value).

AUTO (default) The electronic shutter speed is set automatically by the amount

of light sensed by the camera.

NUMERIC VALUE The higher the number, the faster the electronic shutter.

The slowest shutter speed setting is x128

The fastest setting is 1/120,000 = 1/120,000 second

Increasing the shutter speed lowers the light sensitivity and reduces the streaking of fast moving objects.

*NOTE:

Set the shutter speed to FLICKERLESS if you are using an NTSC camera in a 50 Hz environment. This will eliminate any flicker that may occur in the picture

AGC

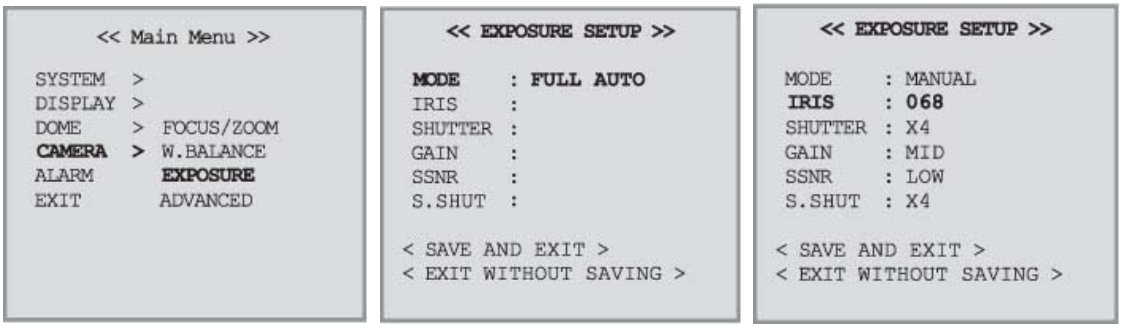
The AGC (automatic gain control) adjusts the brightness of the pictures. The brightness increases as the number gets higher. (Default: MID)

SSNR

SSNR enhances digital noise reduction property. There are three settings:
LOW/MIDDLE/HIGH (default:: LOW) When gain level is higher and higher,
SSNR will reduce the gain noise to make clearer image.

SLOW SHUTTER

When Input luminance level is too dark, Slow Shutter function is set automatically.



7.5.3. CAMERA: WHITE BALANCE

This feature automatically processes the viewed image to retain color balance over a color temperature range. The default setting for auto white balance is ATW. White Balance has following four modes.

ATW INDOOR

Automatic White Balance for indoor.

ATW OUTDOOR

Automatic White Balance for outdoor.

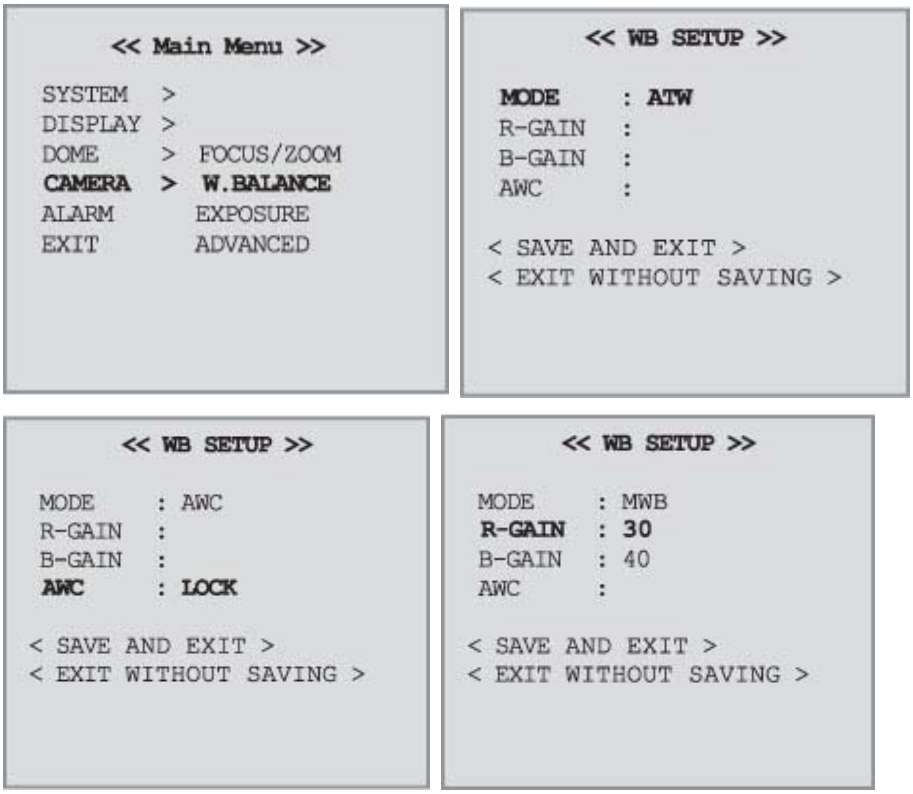
AWC

When AWC is selected, AWC option is enabled automatically. Click the P/T Panel right button to push current white balance and then release the P/T Panel to lock current white balance.

MANUAL

When manual white balance is selected, R and G gain options are enabled automatically. You can adjust R gain and G gain manually. You will see the color change on your monitor.
R GAIN (default: 29) Settings ranges from 0 to 99. Adjusts the picture output in the red range. As you change the value, you will see the color change on your monitor.

B GAIN (default: 41) Settings ranges from 0 to 99. Adjusts the picture output in the blue range. As you change the value, you will see the color change on your monitor.



7.5.4. CAMERA: ADVANCED SETUP

BRIGHTNESS (default: 7)

Settings range from 1 to 16. Increases as the number gets higher.

SHARPNESS (default: 7)

Settings range from 1 to 16. Enhances picture detail by increasing the aperture gain of the camera and sharpening the edges in the picture.

BACKLIGHT COMPENSATION (BLC)

Backlight compensation enhances objects in the center of the picture. The dome uses the center of the picture to adjust the iris. If there is a bright light source outside of this area, it will wash out to white. The camera will adjust the iris so that the object in the sensitive area is properly exposed.

There are four backlight compensation settings:

OFF (default): Backlight compensation is not activated.

LOW/MIDDLE/HIGH: Backlight compensation is activated.

LINE SYNC

Line sync refers to a programmable function that allows you to synchronize all cameras within a matrix system.

*NOTE

emp-e100z automatically senses V-Sync input. No line sync setup is required for the control systems that provide a V-Sync signal.

here are two settings for line synchronization:

EXTERNAL (default): Adjusts the phase of the line sync to synchronize input power. Phase settings range from 0-358 degrees.

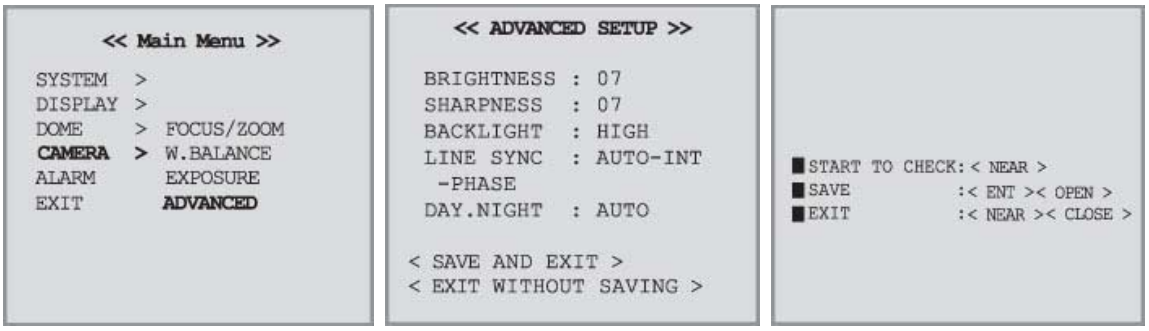
INTERNAL: The dome synchronizes to an internal clock.

DAY & NIGHT

AUTO: auto 2 According to the luminance level, D&N filter is automatically switched

COLOR : D&N filter is on

B/W: D&N filter is cut off



7.5.5. CAMERA: ALARM

IN NC (Normal Close) or NO (Normal Open)

OUT : Alarm output.

PRI. : Alarm priority.

ACTION : Alarm activates various surveillance modes with preset, tour, pattern and scan.

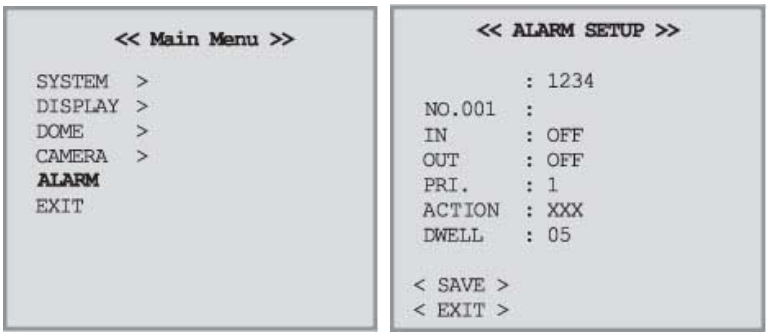
TIME : alarm action time.

To program a alarm:

1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select ID. Press the [TELE] button or turn the P/T Panel clockwise to setup.
2. Select IN, OUT, PRI options.
3. Use the P/T Panel to position the cursor beside MODE. Press [TELE] or [WIDE] button to change action. Click the P/T Panel right button to change action number.
4. Save and exit.

To disable or clear a alarm:

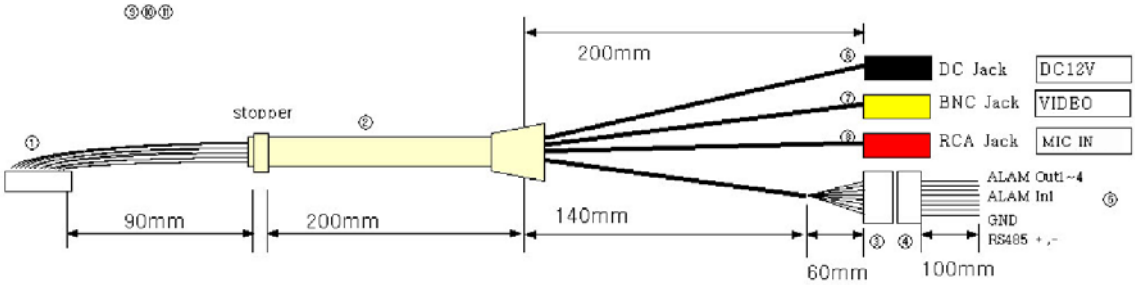
1. Use the P/T Panel to position the cursor beside NO.xxx. Move left or right to select ID.
2. Press the [WIDE] button or turn the P/T Panel counterclockwise to clear.



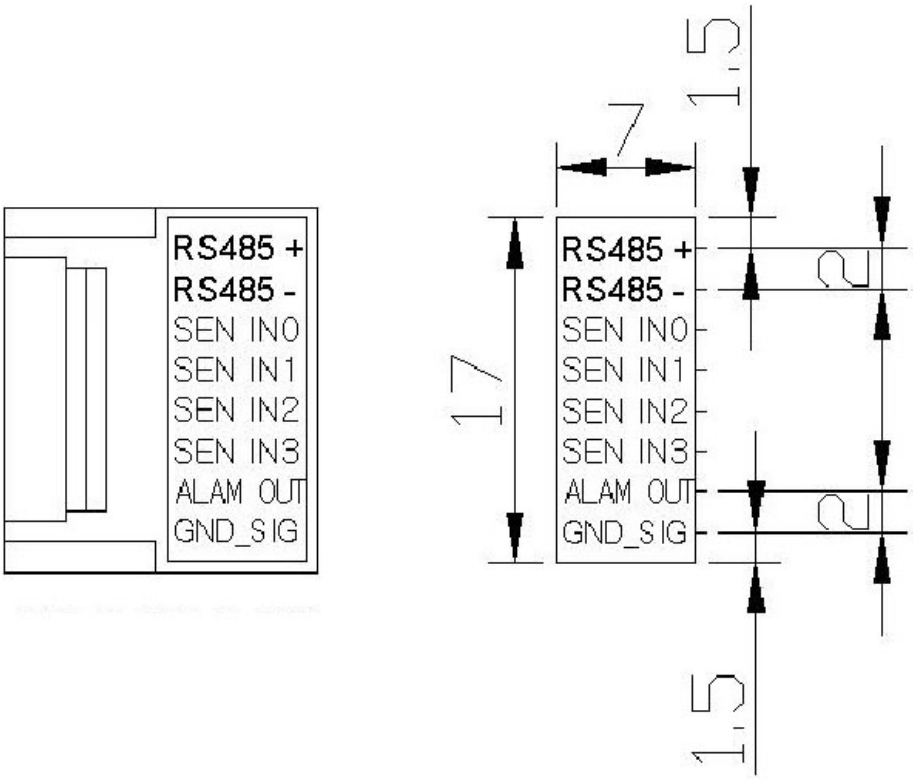
APPENDIX A.

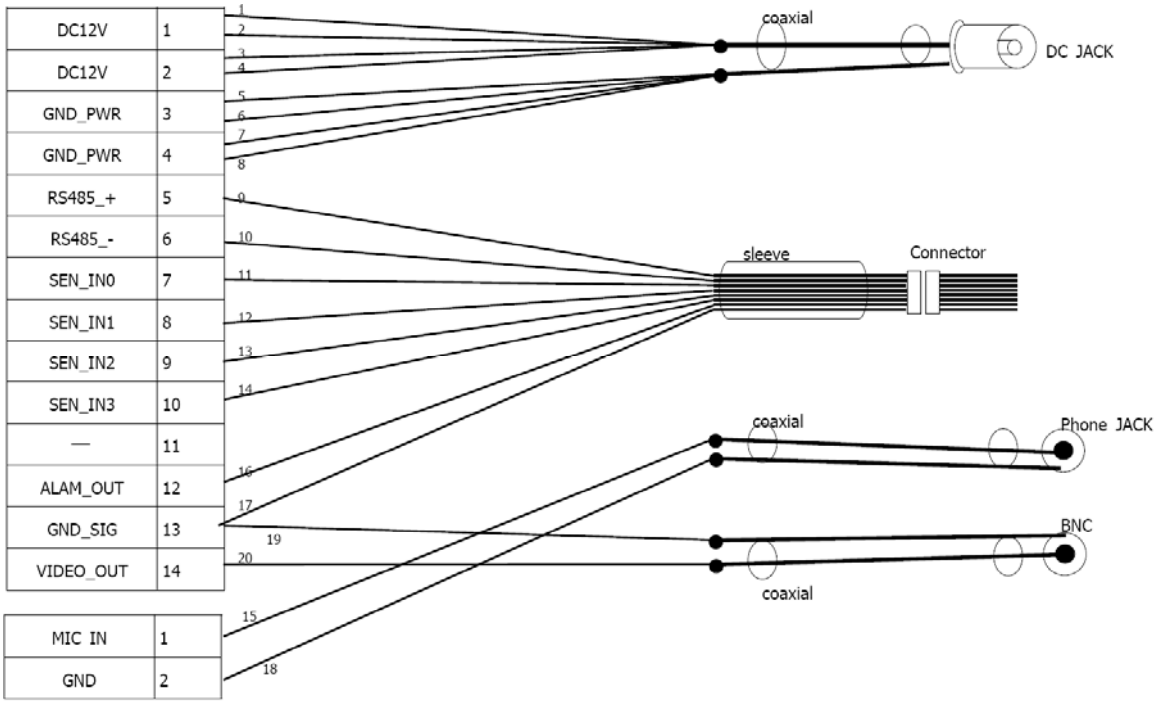
Connection Diagrams

• **Ext Harness**



• **Extend Connector Label**




DC12V 1
DC12V 2
GND_PWR 3
GND_PWR 4
RS485_+ 5
RS485_- 6
SEN_IN0 7
SEN_IN1 8
SEN_IN2 9
SEN_IN3 10
— 11
ALAM_OUT 12
GND_SIG 13
VIDEO_OUT 14
MIC IN 1
GND 2
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
coaxial
DC JACK
sleeve
Connector
coaxial
Phone JACK
BNC
coaxial

APPENDIX B.

Technical Specification of SVD-3020

Camera	Image Sensor	NTSC : 1/4” Interline Transfer CCD , 768(H) X 494(V)	
		PAL : 1/4” Interline Transfer CCD , 752(H) X 582(V)	
	Optics	10X, f=3.8 to 38.0mm(F1.8)	
	Min Focus Distance	1m	
	Scanning System	2:1 Inter	
	Frequency	(H) 15.734KHZ (V) 59.94HZ (NTSC), (H) 15.625KHZ (V) 50HZ (PAL)	
	Resolution	500 TV Lines(Min.) : Color(Wide) / 570 TV Lines(Min.) : B/W(Wide)	
	S/N Ratio	50dB (AGC off, Weight ON)	
	Gamma Correction	0.45 or 1 (Selectable)	
	D.zoom	OFF/ON(X2~X10)	
	Minimum Illumination	0.7 Lux/ F1.8(50 IRE) ; Color 0.02 Lux/F1.8 (50 IRE) ;B/W	
	Day & Night	Auto 1, Auto 2 , Color, B/W(ICR)	
	White Balance	ATW/AWC/Manual (1800’K~10,500’K)	
	Video Output	CVBS: 1.0Vp~p/75Ω	
DOME	Pan Angle / Speed	360 Continuous Rotation, 0.1 ~ 400 /sec	
	Tilt Angle / Speed	0 ~ 94 , 0.1 ~ 300 /sec (According to Zoom Speed)	
	Preset Speed	Max. 400 /sec	
	Preset	1 ~ 240 Preset	
	Guard Tour	8 Guard Tour (Preset, Pattern, Autoscan, Tour Input)	
	Pattern	8 Pattern, 960sec Memory	
	Communication	RS-485, Baud Rate : 2400(default),4800,9600,38400bps	
	Alarm	4 Alarm Inputs, 1 Alarm output	
	Auto Scan	8 Auto Scan	
	Dome ID	Camera 255 ID : Network IP	
	Screen Display	Camera ID, Pan/Tilt Angle, Zoom	
NETWORK		NTSC	PAL
	Image Resolution	704x480,704x240,352x240	704x576,704x288,352x288
	Frame rate	160x240,160x96	160x288,160x128
	Video Compression	MPEG4 / JPEG	
	Video out	1CH	

	Audio Compression	G.711 (Two-way Audio)
	Network Protocol	TCP/IP, DHCP, FTP, SMPT, HTTP, PPPoE, PPP, ARP
	Compression Rate	Min. 500 Kbps to Max. 2 Mbps
	System Requirements	Microsoft Window 98 SE or higher Intel Pentium 800MHz or faster 256 MB or higher
	Supported Web browser	Internet Explorer 6.x or later
	Monitoring Tools	Web Browser or Monitor Software
	Monitoring Via Network	Maximum 20 persons
	Event Notification/ Via E-Mail	Yes
	Motion Detection	Yes (16 x 16)
	Operation Temperature	-10'C to +50'C (14'F to 122'F)
	Alarm In/Out	4 / 1
	Audio In/Out	1 / 1
	Network	RJ-45 (10/100 Base-T)
GENERAL	Certification	CE, FCC CLASS A 1995
	Power Source	DC12V , 750mA
	Operating Temperature	0'C ~ 40'C (32 F ~ 4.4 F)
	Operating Humidity	0 ~ 90%RH (Non-Condensing)
	Storage Temperature	-20 C ~60 C(-4 F~140 F)
	Material	Polycarbonate/Aluminum
	Color	IVORY/ Black
	Dimension	3.5''Clear Bubble Dome(125 x 129.4)
	Weight	Approx. 780g

APPENDIX C

Troubleshooting

Q. Video not displaying
A. No electrical power: Check electrical connections **A. Incorrect IP address:** Check and correct the IP address **A. User not authenticated:** Check user ID and password **A. Not connecting to network:** Check PC's network settings **A. IP Camera inoperative:** Connect the video server to the IP Camera using a Cross LAN Cable If video displays, it means that the IP Camera works properly.
Q. Video not recording
A. Time Schedule is not set up for the desired time Set up Time Schedule for the desired time **A. Events are not recording** Check that events are set up on the Schedule Mode **A. No space on PC's hard disk** Delete some video files or change the hard disk **A. Not enough memory space of a PC** Close other PC programs If several viewer programs are running simultaneously, stop some viewer program(s)
Q. PTZ not working
A. Electrical power Check electrical connections **A. Unauthorized User** Check if the User is authorized to use PTZ **A. Zoom not working** Check if the camera has a zoom lens

Q. Cannot delete ST4 file

A. Cannot delete recorded file (ST4)

Files cannot be deleted while playing

Stop playing and delete

Seorim Technology Co., Ltd
#371-50, ACE HIGH-END TOWER III RM1007
Gasan-dong, Geumcheon-gu, Seoul, 153-787, Korea
Tel: +82--2624-0590
Fax: +82-2-3624-0597
E-mail: sales@seorimtech.com
http://www.seorimtech.com